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# Western Europe in the Spring of 1954

## FURTHER REFLECTIONS UPON UNION AND UNITY IN WESTERN EUROPE

*by* JOHN MURRAY, S.J.

### 1. The Holy Father's Appeal

THE present Holy Father has on more than one occasion used his Christmas broadcast to bring home a particular political message. One recalls instantly the famous Christmas broadcast of 1939, in which he laid down five points or principles that were essential for a genuine and permanent peace settlement. In the broadcast for 1953 was included a paragraph which bore directly and with insistence upon the present situation in Western Europe and the efforts that have been made these past three or four years to promote closer association between its peoples.

Referring to the factors which divide the peoples of Europe in both the political and economic spheres, the Pope declared that they could best be dealt with by means of a Continental Union. Continental peoples are very different in habits and tradition but the realities of geography and a common historical experience have brought them very near to one another. One strong argument in favour of such a Union is the failure and indeed the breakdown of nationalist policies.

> The time—the Holy Father added—appears mature for this concept (of Union) to become a reality. In the first place we exhort to action Christian statesmen, deeming it sufficient to remind them that Christianity has always sought to advance every kind of peaceful union between nations. Why then do they still hesitate? The goal is clear: the needs of the various peoples are in full evidence. If anyone asks in advance for an absolute guarantee of success, the answer must always be that there is a certain risk. But it is a necessary risk that must be taken; a risk that is commensurate with present problems and opportunities; and it is a reasonable risk. We must proceed with caution and our steps need to be carefully calculated. But why distrust the high measure of skill which has been attained by political knowledge and experience? There are men capable of foreseeing the obstacles and of providing the remedies. The supreme spur to action ought to be the seriousness of this period through which Europe is struggling to find her way. There is no security for her that does not involve a certain risk. To demand absolute certainty before action is to fail in one's sense of duty and responsibility to Europe.

This paragraph of the Papal broadcast will have given grand and well-merited encouragement to Christian statesmen of the calibre of Dr Adenauer, Signor de Gasperi and Mm. Schuman and Bidault who have thrown themselves with energy and enthusiasm into the attempt to secure a more closely integrated Western Europe.

## 2. Post-war Experiments

One of the striking features of post-war Europe has been this effort to bring about a firmer association between the free countries. Some of the motives for it are clearly short-term motives : the need for mutual economic assistance, the problem of common defence against invasion from the East. It would be a grave mistake, however, to dismiss this effort as one of merely short-term necessity or interest. The notion of " Europe " and the " European " has come definitely to the fore and has come to stay. Men are acutely conscious that the old notion of countries existing side by side and retaining their full sovereignty is out of date. With the development of aircraft and guided weapons and atomic power the world has shrunk, and the peoples are being pressed together, are being compressed, forced up against one another. There is far less room to manoeuvre. As the consequence of Europe's collapse and decline in the second world war the centre of world power has shifted away from Europe—Westwards to the New World, and Eastwards into Asia. This rhythm of history has again given the peoples of the Continent a keener appreciation of their *communion ;* they are aware, and more sensitively so, of a community, of problems and of interests. And many among them, those who have a feel for history and an understanding of their European heritage, remember that they were once members of a spiritual Europe that was Christendom. They had then a double loyalty : to their own kith and kin, to home and fatherland, and at the same time a loyalty to a Christendom that was in fact Europe, and to this Europe, despite their local allegiances and with no detriment at all to them, they once genuinely belonged.

There is, accordingly, a widespread feeling to-day on the Continent that the old political and international order must be replaced by something new, eventually a new framework in which the European peoples will live together, no longer side by side in peaceful interrelationship but as members of a more closely coordinated society. The more enthusiastic among them already speak of European Federation or, at the least, of a federated Western Europe. Others would prefer to move more cannily ; they stop short for the time being at this concept of federation and they envisage more intimate contacts between the countries as they now are.

It may be of value to enumerate briefly what steps have been taken in the direction of this closer association.[1]

One of the first of them, if we leave out of account the union of Belgium, the Netherlands and Luxembourg in what came to be known as *Benelux*, was the Brussels Treaty, negotiated between Britain, France and the Benelux Powers in early 1948. Its first purpose was economic, but even this was consciously linked with the notion of *Europe* and of *European* co-operation. Speaking in the British House of Commons in January, 1948, the late Mr Ernest Bevin, then Secretary for Foreign Affairs, treated of the purpose of this agreement ;

> We must go beyond the circle of our immediate neighbours and consider other European civilizations, including the new Italy. Their eventual participation is no less important than that of other countries, with which we must deal first, if only for geographical reasons. *We are thinking now of Western Europe as a unity.* The nations of Western Europe have already shown their capacity for working together effectively. That is a good sign for the future. We shall do all we can to advance the spirit and machinery of co-operation.

In the treaty it was specified that the main object would be to secure the economic recovery of the five countries in question *and* of *Europe as a whole.* The contracting Powers bound themselves,

> to co-operate loyally and to co-ordinate their efforts to create in Western Europe a firm basis for European economic recovery.

A second object loomed through the discussions. This was the need for a common defence against conceivable aggression. The defence problem was hinted at rather than elaborated in this treaty but the hint was shortly to be worked out to its inevitable conclusion. A year after the signing of the Brussels agreement the Atlantic Treaty was adopted. This linked together the five Powers of the Brussels agreement, five further European States plus the United States and Canada. Its aim was to provide a defensive military alliance that should set up a balance of power against Russia. But it was intended to have its repercussions in both the economic and political spheres.

*En passant*, I should like to mention yet another inter-State organization, the Organization for European Economic Co-operation (O.E.E.C.). After the breakdown of a conference with the Russians, the Foreign Ministers of Britain and France invited other European Powers to a congress at Paris to discuss plans for fuller economic prosperity. Fourteen countries accepted the proposal : Austria, Belgium, Denmark,

[1] I have contributed two articles to STUDIES on this general subject : the first, *The Problem of Europe*, in March 1951 ; the second, *The Growing Sense of Europe*, in the issue of September–December 1952. In the second article I discussed the Schuman Plan, as it was then outlined ; this has now been formally realised in the European Coal and Steel Community. I dealt also with the Pleven Plan for the formation of a European Defence Force. It is round this project that French political opinion has become so sharply polarised.

Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Switzerland and Turkey. In April, 1948, a convention was signed by all sixteen members. Into its work I shall not enter except to remark that it has already helped the member countries to co-ordinate their economic planning and to facilitate commercial relations between them.

The Brussels Treaty stemmed from government action. At the same time various groups and societies existed to encourage the notion of *Europe* and closer *European* association. Of these societies nine of the more prominent banded together and set up an international committee. The result of this amalgamation was seen in a Congress held at The Hague during May, 1948. To the Congress representatives came from nineteen countries, and among those taking part were twelve ex Prime Ministers, many ex Ministers of State and actual Members of Parliament, as well as eminent men in differing walks of life. The terms of reference of the Congress were definitely *European*. They were :

> to affirm the *European objectives* in the political, economic and cultural fields, to stimulate the peoples to a unanimous determination and stir the governments to action.

At the Congress was launched the European Movement which began at once to call for a European Assembly.

### 3. The Council of Europe

From the marriage of the Brussels Treaty *and* The Hague Congress was very soon born the Council of Europe.

In October 1948 the Foreign Ministers of the Brussels Powers set up a committee to study the questions proposed to them by The Hague Congress. In May of the following year, ten countries signed in London the Statute of the Council of Europe. By this Statute a Consultative Assembly was instituted which was intended to be a vehicle of European opinion and to fulfil the function of a European Parliament. Each member country sends its representatives, not elected *ad hoc*—at least not yet—but nominated by the different governments. Each year a session of thirty days is held but since 1950 this has been divided into two half yearly sittings of fifteen days. The debates are usually most illuminating, both because they give a cross section of European opinion and also on account of their unprejudiced and intelligent approach to European problems. I have recently read the verbatim account of the Assembly discussions in September 1953 which had the suitable title of *A Policy for Europe to-day* and I was very considerably impressed by their high quality ; they were, in the main, experienced, penetrating and realistic. I shall refer to them later in this article.

The governments which signed the Statute were those of: Belgium, Denmark, France, Ireland, Italy, Luxembourg, the Netherlands, Norway, Sweden and Britain. In August 1949 Greece, Turkey and Iceland were invited to join the Council. Western Germany and the Saar have since become members.

With the Consultative Assembly there is also a Council of Ministers, which includes the Foreign Ministers of the States that have membership. This Council was intended to be the executive organ of the European Council and to pass on to their respective governments the suggestions and decisions of the Assembly. Complaints are frequently voiced in the Assembly that this Council is the dormant partner and that it is more conspicuous for what it omits to do than for what it actually does. There, the critics argue, is the weak link in the European organization. On the other hand, some claim that the Council of Europe should be given wider powers so that it may develop into a central and even a supra-national authority.

## 4. The Three Lines of Effort

So much for the European background during the past few years. Against that background, one can trace three lines of general effort.

The first, that outlined in the famous Schuman Plan, first put forward by M. Robert Schuman in May 1950. It was a bold proposal, for what it advocated was nothing less than the " pooling " of the coal and steel resources of France and Western Germany. The resources were to be placed under a High Authority and so taken from the immediate control of the governments of Western Germany and France. The first objective was economic but the overall political intention was even more significant and, it may be added, revolutionary.

> The French Government—M. Schuman stated—proposes to place Franco-German production of coal and steel as a whole under a common High Authority, within the framework of an *organization open to the participation of the other countries of Europe.*
>
> The pooling of coal and steel production should immediately provide for the setting up of common foundations for economic development as a *first step in the federation of Europe,* and will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims.
>
> The solidarity in production thus established will make it plain that *any war between France and Germany becomes, not merely unthinkable, but actually impossible.*
>
> By pooling basic production and by instituting a new Higher Authority, whose decision will bind France, Germany and other member countries, these proposals will build the *first concrete foundations of the European federation* which is indispensable in the preservation of peace.

I have underlined significant phrases which themselves emphasize the European character of these proposals.

The Schuman plan was accepted in treaty form in April 1951 and Italy and the Benelux countries joined France and Western Germany. Since August 1952 it has been in action, under the title of The European Coal and Steel Community. It has an *Assemblée Commune* of its own, a miniature Parliament ; a High Authority of nine members ; and a Council of Ministers. Dr Adenauer, first chairman of the Council of Ministers, told the *Assemblée* : " You are the first sovereign Parliament in Europe, built on a supra-national basis. Our Council is an organic element inserted in the new supra-national European Community ".

So much for economic integration, in this all important matter of heavy industry. The *Assemblée* has since been entrusted with a political task, that namely of preparing a federal scheme of association for the six countries in question. A committee of twenty-six members of the *Assemblée* worked at this project during 1953 and their proposals, after formulation, were studied at a meeting of Foreign Ministers at The Hague in November of that year. From this, it is hoped, there will emerge a new political structure for the six countries of what has come to be known as " Little Europe ".

What is causing the greatest difficulty is the third line of development, that of a common Defence Army for the Western European countries. Here again, the original suggestion came from the French, in the shape of the Pleven Plan, outlined in October 1950 by M. René Pleven, then Prime Minister. The suggestion of a common army drawn from the six Western Powers has been discussed and amended over and over again. It received its final form at the meeting of the Atlantic Treaty Powers in February 1952 at Lisbon.[1] It will not be necessary to enter into details. What is important is to see the differing points of view of the French and Germans. In the first place, it has to be insisted that there is a great deal of good will on either side, and that in particular the attitude of the West German government of Dr Adenauer is both admirable and encouraging. For both sides, at the moment, there is the desire to check German militarism. The West German government would actually prefer a European to a revived national German army. This has to be borne in mind. Yet the mood might alter, if the plan of the European Defence Community be not achieved. The French fear, and with good reason, a revival of German militarism and indeed any rearming of the Germans. Yet realism tells them that Western Europe cannot be defended without German participation. How, then, can the dangers inherent in German rearming be countered ?

[1] I gave the history of these amendments in the article, *The Growing Sense of Europe*, in September–December, 1952.

The French and German views differed to begin with. The former wanted a Defence Force, in which units would be integrated at the lowest possible level consistent with efficiency. This meant at brigade or even at battalion level. A division would comprise, for instance, one German, one French and one British or Italian brigade ; or just conceivably, a brigade might have three varying national battalions. The Germans favoured larger national contingents ; and military experience was on their side. At Lisbon a compromise was reached. The Defence Force would consist of 43 groups, each of about 13,000 men, and of these Germany would contribute twelve.

The Defence Force or Community, to give it its more official title, has been now accepted by the governments of all six countries. Yet the French acceptance, that was given hastily and without conviction prior to the meeting of the three heads of government in Bermuda in December 1953, remains uncertain. It has to be reviewed after the conference of Foreign Ministers in Berlin.

## 5. Immediate Problems

I can best approach some of the immediate questions in Western Europe by referring to the debates of the Council of Europe of last September. Their theme, as I have mentioned, was that of *A Policy for Europe To-day*. Opinions were voiced by representatives from more than ten countries.

The discussion had as its starting point the changed attitude or, to put it more cautiously, what appeared to be a changing attitude of the Russian authorities since the death of Stalin. How, it was asked, was this to be interpreted ? M. Spaak, in his introductory *rapport*, was very guarded. His own opinion was that the change was merely tactical, due in part to domestic difficulties in Russia and also to the Russian realisation that the Western Powers had grown in strength and determination. Indeed, one noted little wishful thinking during the debates ; the delegates had their feet firmly upon the ground. M. Spaak dismissed the question of disarmament, for instance, as quite outside the range of practical negotiation with the Soviets. The only kind of disarmament worth consideration was a process that would be general, progressive and above all controlled. But it was perfectly clear that the Soviet Union would never accept such a process.

There was general agreement, however, that the Western Powers should hold a conference with Russia. As to the manner of it the members were divided. Some preferred a meeting of heads of State without a fixed agenda. This, they urged, would allow a general interchange of points of view and provide for flexibility. Others, more realistically and recalling the war time meetings at Teheran, Yalta and Potsdam,

demanded a definite programme for discussion. They further insisted that the Western Powers must have a common mind and purpose and must be perfectly certain about the line behind and beyond which they would not retreat. It was generally agreed that the most vital questions for discussion were Austria and Germany. Since these debates a Four Power conference has been fixed for Berlin towards the end of January of this year. It is still in the future, as I write these lines.

What was most significant in these discussions was the recognition that Western Germany had made a remarkable recovery since 1945 and was in fact the strongest country to-day upon the Continent. It would be no exaggeration to say that Germany dominated these debates. Germany has revived with a rapidly quickening tempo, especially in the past four years. The Germans have rebuilt their homes and cities ; they have reconstructed their factories and industries and bent their energies to the one task of setting their national economy on its feet ; they have absorbed millions of German exiles and refugees from the East. Four years of government by Dr Adenauer and his coalition have given them stability and relative prosperity and as the consequence of the 1953 elections they have one of the most enduring governments in Europe.

The Strasbourg delegates were quick to seize upon two salient facts : the first, this resounding election triumph of Dr Adenauer and the *Christian Democratic Union*, which was definitely a victory for the *European* idea and the *European* alignment of Western Germany : and secondly, the widespread riots and strikes in Eastern Germany during the summer, which made it evident that the East Germans are thoroughly discontented with Russian occupation and Communist rule and—further—will not easily be subdued or controlled by the Russians. The German people have spoken with no uncertain voice, both in West and East.

The general consensus of the Strasbourg Assembly was that Germany must be re-unified. This, in their judgment, was question No. 1. Nor did they dodge the implications. A re-unified Germany would include nearly seventy million Germans. Potentially, a reunited Germany would predominate upon the Continent. Some of the speakers were Dutch and Belgian, and they had experienced the unpleasantness of German occupation during the war but this did not affect their objectivity. They were facing facts. They rejected the facile suggestion that a re-unified Germany could be neutralised. Such a plan had been put forward by Russia which offered re-unification and a German national army, provided only that the reunited Germany would not be associated with any outside Powers. The purpose was to break Germany's ties with the west and eventually to swallow Germany into the Soviet orbit. They rejected also the notion of a completely neutral and unarmed Germany, not least upon the grounds that German assistance was necessary for proper Western defence. The disarmament of Germany

might have provided the best solution after the 1914–18 war : it was out of date as a solution to-day.

> The solution of a disarmed Germany—argued M. Spaak—would no doubt have prevented the events of 1914 and 1939 : but it is entirely unreasonable in a world whose problems have wholly changed in character and where the perils with which we are faced are completely different. The disarmament of Germany to-day is the classic example of the solution which settles already-resolved problems, but which provides no answer whatsoever to future problems and leaves all Europeans, of whatever species, at the mercy of the same perils.

M. Spaak, who made these statements, is–be it remembered—both a Belgian and a Socialist.

To those of us who do not live on the Continent it might seem surprising that a country, as heavily defeated as was Germany in 1945 and not yet enjoying a definite peace settlement, should now be recognized as the strongest Power, potentially, in Europe. The question is how Germany can be fitted into and play her part within a European structure. Now, the Western German government has opted very definitely for association with the Western Powers and for a European policy. Its leaders have frequently declared that, if Germany is to be rearmed—and of this there can be little question—they would prefer this to happen within a European framework. Dr Adenauer has collaborated very readily with the French in the establishment of the European Coal and Steel Community and has welcomed the European Defence Army.

The policy of the United States and Britain, and generally of the countries associated in the North Atlantic Treaty Organization (N.A.T.O.) is that Western and Eastern Germany should first be reunited, that elections should then take place for a German government, with which peace would officially be concluded by the Western Powers plus Russia. A government thus elected after unification might conceivably be Socialist, since the proportion of Catholics is far less in Eastern Germany—and Catholics give the major support to Dr Adenauer's party—but, in the light of the 1953 elections, this is by no means certain. What is certain is that the overwhelming majority of East Germans will be anti-Russian and anti-Communist. And indeed there is no other alternative for Germany than that of association with the West.

Germany has already bound itself to close co-operation with France and the four other countries of Little Europe in the Coal and Steel Community ; and together with those countries, it has abandoned some of its national sovereignty for the agreed term of fifty years. It is ready at the moment to make a similar agreement for its armed forces.

The situation is as follows. The European Defence plan has been put forward, in the first place by the French. All six countries in question have ratified it : only the French have real misgivings. These misgivings

one understands. Gestures of good will, however genuine, cannot easily remove the grounds of ancient and historic mistrust. But the point has to be urged. What is the alternative ? Germany is necessary for Western European defence. In any case, a Germany, left out of Western European arrangements, would decide for herself after unification when and to what extent she would rearm. You solve nothing by excluding Germany except that you increase your own peril and leave Germany entirely free.

There remains, first of all, the solution of the European Defence Force, that the French proposed and now fear, and which the Germans are now ready to accept. By this compromise, German units are to be welded into an international army, so that they will no longer be under the control of the German government ; fears of German aggression in the direction of Eastern Europe are thereby allayed, for the Germans would no longer command these European contingents ; a great encouragement would be given to the notion of *Europe* and of common *European* effort. There is a further point. A European Defence army, which because of its intra-national composition would be essentially defensive, would at the same time create a second focal point of defence for the free world. I am not thinking precisely in terms of Europe as a *Third Force*, a doctrine that had a certain vogue after the war. But it would be an excellent thing—both for the United States and Russia—if Europe could attain a position of greater security through its own resources, whether of economy or military strength. Otherwise, Europe may remain something of a No Man's Land, a field of manoeuvre and interest for Russia and the United States. It is only fair to say that this is what the United States want and are doing their utmost to encourage. Russia does not want it and will do all she can to sabotage it, more particularly if it involve a Europe in which German influence will grow dominant.

The only practical alternative to the European Defence army would be the inclusion of a re-unified Germany among the Powers of N.A.T.O. This solution would be a severe blow to the cause of closer European association. It would leave a Germany free to create a national army and, even if French opposition were overcome, Germany, like the other Atlantic Treaty Powers, would be able to contract out of the treaty, should she so wish. It would further mean that the two sides in world strategy would face one another along the line of Germany's Eastern frontier, and the remaining Atlantic Powers would have far less control over German military initiative than under the European Defence scheme. It would always be possible for France to veto the admission of Germany. However, should matters come to this pass, there would certainly be vigorous reaction from the United States. The Americans are favourably disposed towards Germany and not well disposed towards France. A bigoted resistance to the admission of Germany on the part of France would in all likelihood lead to an American-German alliance.

These are the data of the military problem on the Continent. Up to the present, the government parties in Western Germany have favoured the Defence plan, while the Socialists rejected it. But this rejection was not so much a rejection of the project. It was bound up with their notion of proper priorities. First, they argued, bring about the re-unification of Germany, which would be possible only through negotiations with Russia, then think about military questions. A too speedy entrance of West Germany into a European army would jeopardize German reunion, for under those circumstances the Russians would never agree to it. Even on this point, however, the German Socialist outlook is changing. If no progress is made at the Berlin meeting of Foreign Ministers, then the Socialists will have no alternatives but the European or a national army. After all, even for ideologists, politics is *l'art du possible* ; and there will be no other possibility. In any case, it is fatal to hitch policies to possible Soviet concessions or Soviet good will. Russia respects one thing only : the evidence on the other side of material strength and moral determination.

Of France one must speak always with appreciation and sympathy. Yet even those who greatly respect the French genius and have genuine feeling for the French people cannot withhold criticism to-day. To give them their due, the French themselves are the last to withhold it. The constitution of the Fourth Republic has all the defects of that of the Third Republic without that sense of national unity which used to exist as a healthy background to an unhealthy political structure. The shifts and manoeuvres during the Presidential election angered and disgusted a large number of the French. The existence of a formidable Communist party in *Chambre* and Senate and, to a lesser but still significant degree, of a Gaullist grouping means that French democracy has to function with only two-thirds of its elected representatives. And of late both the Socialist and the Radical parties have shown considerable irresponsibility : the former, by voting with the opposition, though on most points they do support the government ; the latter, by their captious behaviour during the election of M. Coty and their bigoted opposition to M. Laniel because he is a Catholic. Responsible Frenchmen may still mistrust the Germans and dread the revival of Germany but they see the one hope for the future of France and indeed of Western Europe in closer collaboration with Germany and with other Western European countries. And in fact, the opponents of the Defence Force have submitted no practical alternative.

Finally, one must record the French objection that Britain remains free from engagement in the proposed European army, and yet both Britain and the United States expect France to engage herself irrevocably. The French argue that France, like Britain, has territories outside the motherland and therefore non-European responsibilities, and has actually

at the moment more troops on active service in Indo-China than Britain has in Malaya and in Kenya. The British answer that they have several divisions of troops upon the Continent, which it is their intention to leave there, with the later approval of the government of a reunited Germany. To this the French would reply that this may be so but the British are not committed irrevocably to this ; they will always be able to withdraw these divisions. The arguments might proceed further and indeed indefinitely, for the British could point to five distinct guarantees which have been given to France, either individually or in the framework of wider agreements : among them, the Dunkirk Treaty between Britain and France, the Brussels Treaty of 1948, the North Atlantic Treaty and the subsequent extension of the guarantees accorded in this Treaty to all members of the European Defence Community. It must be admitted that public opinion in Britain would be overwhelmingly against participation in a European Defence Force, that is against such participation as would take British forces out of British control. But, for my own part, I think it is both a pity and a mistake that some British forces, if only of a token character, could not be integrated with the contingents from other countries, in this European army. So would many of the French fears be allayed and the army itself be given a broader, and therefore a more European, basis.

### 6. FURTHER EAST

To return, after this considerable digression, to the Strasbourg debates. In his *rapport* M. Spaak raised a question which was sharply criticised. The impression he gave was that, once the German and Austrian problems had been settled through negotiation with Russia, the Western Powers might give a security guarantee to Russia. The suggestion was ambiguous. Did this mean that the Western Powers were to acquiesce in a *fait accompli* and ratify the Russian occupation of Eastern Europe ?

On this point, several of the Strasbourg delegates showed a more complete sense of what is Europe than did their *rapporteur*. Such a guarantee, insisted M. Debre of France, would involve an abandonment, maybe only provisional, but none the less an abandonment, of the whole of Eastern *Europe*. It would mean that the West would leave provisionally on the far side of the Iron Curtain these nations which had fought for and with the free world. Such a policy of abandonment, he argued, could not be accepted nor defended morally. " We must be human before we are clever ; we must remember that those nations have passed from the tyranny of the Nazis to the tyranny of the Soviets, and their appeal for freedom is the expression and the measure of their belief in the values of the free world ".

M. Godehart of Holland was even more explicit.

> *Europe* can never accept it as a *fait accompli* that these unhappy countries shall remain occupied by the Soviet Union. They are part of the body of Europe and, so long as this reality is not recognized *de facto* and *de jure* by the Soviet Union, an abiding peace in the world will be an impossibility. If, in effect, it be the desire of the Soviet Union to establish a long period of co-existence with the West, as their spokesmen have on many an occasion declared, it must bring to an end its colonisation in Eastern and Central Europe and restore to these lands and to their peoples that liberty which Hitler took from them and which Stalin and Malenkov have refused them to this present day. The Council of Europe would have a very poor sense of its own responsibility if it failed to express itself upon this matter very frankly and without any reserve.

Mr Christopher Hollis, Conservative Member of Parliament from Britain, dealt with the problem in greater detail. M Spaak had spoken of guaranteeing a Russo-German frontier after the re-unification of Germany. But, Mr Hollis asked, ought there to be a Russo-German frontier at all. The last time there was ever a map of Eastern Europe, it contained no Russo-German boundary. " I must confess " he continued " that I think the oddest thing about this debate is that the word ' Poland ' has not yet been mentioned because Poland seems to me to be the key to the settlement of the problems of Eastern Europe. Up to the present we have had, as it seems to me, eight admirable essays on Hamlet, none of which has so far mentioned the prince of Denmark ".

Mr Hollis put forward four reasons why such a guarantee of frontiers and therefore of spheres of interest could not be given. Should the Western leaders agree to it, they would forfeit their moral status. It is one thing to recognize a sad state of affairs as an actual fact and quite another to accept it as part of the proper order. Such a guarantee would be worthless since the Western peoples would never fight for it. In the second place, no solution which does not liberate these countries can be healthy from an economic point of view. A Europe divided permanently by the Iron Curtain is not viable. Eastern and Western Europe are naturally the complement of one another, as culturally they are members of the same community of historical experience and civilization. Thirdly, such a guarantee would be of little purpose unless it were also backed by the power of the United States ; the United States will have nothing to do with it. Finally, Mr Hollis pointed out that the Russian position in these countries, as also in Eastern Germany, is becoming less and less secure. It would be indeed a very foolish thing if the Western Powers started to underwrite this tyranny when it shows definite signs of collapse.

It is dangerous to put an optimistic interpretation on Russian developments since the death of Stalin and equally dangerous to assume that the Russians are now ready to be co-operative. There are good grounds, however, for thinking that Russian commitments in Eastern Europe are creating for Russia just as many difficulties as advantages and that, in the matter of Germany, it is even more to Russia's advantage than to that of the Western Powers to have a definite solution. What the West must still remember is the fallacy and fatuity of appeasement, the belief that solutions have to be sought in compromise. They have in the recent past given away to Russia far more than, in justice and common humanity, they ought to have given : and their concessions have been in terms of human flesh and blood and human liberties. However, the West has grown far stronger during the past three years and more realistic. Its morale is higher. Initiative has to a considerable degree passed over to its side.

One final word. There is one element of weakness in the free world which calls for continual remedy : and this is the lack of a spiritual conception of Western ideals and Western values. For too many Communism is just a more incompetent or unwieldly economic system or a political régime of gross oppressiveness. They fail adequately to realise how it is the complete denial of human nature and human liberties, for the reason that they have not themselves a spiritual approach to humanity and its freedoms. I would end by quoting three short paragraphs from the speech at Strasbourg of a Dutch representative, Mdlle Klompe :

> We in the West know that we are far from perfect, but even in these uncertain and swiftly-changing times we still possess tremendous spiritual and moral resources. What we badly need, however, is the conviction that in the crisis of to-day only a radical and firm realisation of our ideals will save us from a complete collapse.
>
> It is not too late. It is up to us here and now to shape, with the help of God, the history of our peoples. If we examine the depth of what all of us consider in our personal life as the most essential fundamental of our religious or philosophical conviction, we can still find the ways and the means of solving the problem of man's place in the world. I—for my part—and I think the majority of the European peoples will follow me in this—am convinced that the fundamental principle of Christianity, the love of our neighbours as our brothers in God, if put into practice, can give the answer.
>
> A united Europe, working closely together with its partners of the Western world, has a tremendous task to fulfil. It knows that going to war would never bring about the solution. It is convinced that, in building up a society in which human dignity will be fully preserved, it can show the people of Russia that, although strongly opposing the ideology of

their leaders, we consider them as human beings, worthy of our respect and worthy of our love. This is the bridge between East and West which we must build. It can be done, and it must be done. We have the tools ; let us, then, do the job.

## 7. After Berlin

The Berlin meeting of Foreign Ministers has now drawn to its conclusion. Apart from some agreement to discuss later certain problems of the Far East, its results have been entirely negative. The Iron Curtain will continue to be drawn across Germany from North to South. Austria, the first victim of Nazi aggression, is not to have an official peace settlement and to be liberated from foreign troops. It has been made clear to those who needed such conviction that the West cannot in effect negotiate with Russia and that the death of Stalin has made no difference at all to Russia's ultimate purposes and to Russian immediate policies. To what extent this attitude is dictated by long-term projects for aggression and in what degree it is the product of fear, is not so evident.

When a gigantic system has been reared on the twin foundations of force and fear, when in countries controlled by Communism it is fear more than anything else which keeps even the Communists themselves loyal to creed and party, there can be no place for trust and confidence. Masters and victims of mistrust, they can enter into no agreements except where they completely dominate. Nor can they entertain confidence in one another. Such evil, in the end, will bring its special nemesis : it can find no room for mutual trust or reliance ; it views every system not its own and every person not subject to it as its enemy ; it has become prisoner of its own iniquity, destined in the final resort to disintegration and doom.

It is, of course, a tragedy that pressing problems could not be dealt with, and pressing needs and claims satisfied. The peoples of East Central Europe are still subject to a tyranny at variance with their wishes and their traditions. A divided Germany is left as a symbol of a divided Europe. So, maybe, must it continue for a long time. But I cannot help thinking that it is precisely Soviet Russia that has missed its opportunities at the Berlin meeting. Its difficulties in the occupied countries will certainly increase, and it is doubtful whether, even through force, it can hold down the Eastern Germans. The Russian refusal to consider any but their own tendentious proposals will intensify the hatred of Russia and of Communism among those peoples and strengthen the natural and indeed the *European* appeal of the West.

In Western Europe the consequence of this frustrating meeting will certainly be a stronger realisation of the idea of *Europe*. The European Defence Community will be immediately realized, no doubt with some slight modifications which will make it more acceptable to the French while not less acceptable to Western Germany. The attitude of neutralism should have received its *coup de grace* and the German Socialist plan which put first and foremost the reunification of Germany through agreement with Russia must be abandoned for a more realistic and co-operative outlook.

JOHN MURRAY

# Towards a Spirituality of Marriage

*by* DONAL O'SULLIVAN, S.J.

PESSIMISM rarely plays truant for long from the field of spiritual war. In the struggle between the spirit and the flesh he is ever watching to trip spirit by the heels : it is his to suggest retreat when the press of battle is most urgent. In the Christian camp of the twentieth century his role has become a major one. For the City of God is beleagured and entrenched round about : its Sacraments are signs to be contradicted ; and Marriage for the moment takes the main assault. As we enter the second half of this century of giant struggles, the light of Christian love combats a deepening sexual night. Christian optimism in this swaying sector of the fight is a necessity. And Romeward, look, the land is bright !

Pope Leo XIII in the encyclical *Arcanum Divinae* could concentrate on the evils of civil marriage and divorce : that was in the eighties. Fifty years afterwards, man's " freedom " from God had shackled him with new chains. To the evils to be condemned as rampant Pope Pius XI had to add in 1930 birth prevention, companionate marriage, abortion and sterilization. To-day cognizance has to be taken of the spread of homosexuality, more impudently manifested and lauded than even in pre-Christian times. In fact by the placing of all Gide's works on the Index, the Pope has in large measure taken such cognizance. But during most of that half-century which saw the spreading of the tables of the *nourriture terrestre,* the Church at the word of a saint—Blessed Pius X—spread her Eucharistic tables with a generosity unparalleled since early Christian days. Frequent and daily Communion has been the preparation of the present generation for their task of chastity in an aphrodisiac world where " with all sense of shame laid aside . . . the sanctity of marriage is trampled on and derided ". (*Casti Connubii*)

The first half of this century has been under the " sign " of the Eucharist : now it would seem that the hour of Baptism and Marriage has struck. And as it struck, the " Mother of all the Living ", the Mother who alone was Virgin is lifted up as the cause and ideal of that " fair love " which lifts the fleshly body to the spirit's height. Such an " assumption " we shall see to be an aim of Christian marriage. Close on the definition of the Assumption came the unexpected restoration of the Easter Vigil, which is not just another frill on the Church's garment of worship, just " another Midnight Mass ". It is a most dramatic recall to savour the significance of Baptism and to live it in the whole of Christian life. It is a reminder to the laity in particular of their place in the life of the Church and of their peculiar share in the priesthood of Christ. Both truths have long been understressed : " we must look on the present condition of the laity not as a natural and to-be-expected result of spiritual

evolution, but as a shocking abnormality, an obvious disorder which can and must be remedied ".[1] One of the marks of its remedying is the remarkable number of laymen who have written on marriage in the course of the last twenty years. " In the past, while Christianity saved true love, in order that *Agape* should shine in its true glory, *Eros* had to be treated as a coloured person. But *Eros* can be and has been taken into the Christian ideal, and it may be that a new development is at hand, and the mystery of marriage is to have its epiphany ".[2] And who, if not those who are called by a sacrament to unveil the mystery—lay men and women —could more fittingly write of the heights and depths of marriage—or of the daily plod over years on monotonous slopes to a vanished summit ?

For centuries priests had a monopoly of writings upon marriage : they brought to it their mission to teach, theological knowledge, high idealism and experience, both self-acquired and inherited, of the inner difficulties of souls. On the other hand, they did not " know "—literally—what they were talking about ;[3] which was much to their credit but not to the utility of their readers ! And for the last few hundred years no small amount of this writing betrays a negative quality and at times even a horror of sex which has been the cause of great damage both in the religious and married states. Bossuet's *Treatise on Concupiscence* would have amazed St Francis de Sales. The Catholic married writer has obviously a vast subjective advantage : but recent French writings have shown that this advantage has its dangers ; his very nearness to his subject may produce in the layman a myopia from which the priest is immune. And not every lay writer has the theological knowledge of a Frank Sheed. M. Paul Chanson's books are a case in point. They were a well-meant but dangerous effort to clarify the difficult problem of chastity in married relations where conception is inadvisable. They compensate for Bossuet—with a good deal to spare—and would certainly have amazed St Francis in another sense. They gave rise to rather heated discussion in France and were withdrawn from circulation after a decree of the Holy Office in June 1950. However it must be said that many of the *Témoignages* of Catholic couples—encouraged by the heroic Abbé Godin and other priests—have been of great help in the understanding of married problems ;[4] as have been, on their various levels, the publications of *L'Anneau d'Or* and *Les Editions Familiales de France* and *Les*

[1] Quoted from Dr W. Nutting by L. C. Sheppard in an article " The Independence of the Laity " in *The Furrow* for Oct. 1953. The theme of the whole issue is " The Layman ".

[2] Fr Martin D'Arcy in a broadcast review of Guitton's *Essay on Human Love.*

[3] It is probably the unhappiness which they come across in marriages that tempts priests to write. Reading Thibon or Frank Sheed makes one ask whether we should not resist the temptation !

[4] Some however are on a par with " initiation " books of the type so strongly condemned by the Holy Father in his allocution to French fathers of families in Sept. 1951 : " Alors que, devant le secret de l'intimité conjugale, le paganisme lui-même semblait s'arrêter avec respect, il faut en voir violer le mystère et en donner la vision—sensuelle et vécue—en pâture au grand public."

*Cahiers Laënnec.* Jean Guitton and Gustave Thibon have used their philosophical acumen and deep faith to produce two essays which are landmarks on the road towards a spirituality of marriage. In his preface to the English edition of Guitton's *Essay on Human Love* Lord Halifax describes it as " one of the finest fruits of War " ; it was written in a concentration camp. This brief look at recent marriage literature from France would be incomplete without mention of a study by a priest who is a doctor both in theology and medicine : it is Father Marc Oraison's *Vie Chrétienne et Problèmes de la Sexualité.* He uses his medical and theological knowledge in a courageous attempt to synthetize the element of truth in the Freudian system with traditional Catholic teaching. It faces possible, or rather, probable criticism with a strongly commendatory foreword from Father Tesson, S.J., Professor of Moral in the *Institut Catholique.*[1] In England Frank Sheed, Wingfield Hope and Dr E. C. Messenger, in Belgium Father Mersch S.J., and in Germany Dr Hildebrand have written excellently on marriage. This article is in good part based on two recent books, one by Bishop Fulton Sheen, the other by Gustave Thibon a French philosopher.[2] Cleric and layman : that is how it should be ; for celibacy and marriage are complementary in the Christian ideal. The one barometer marks their rise and fall.

* * *

Spirit and life, sense and spirit, soul and body were created by God to be united. But already by the fact of creation there was a certain tension in man : the human conflict has its roots in his nature, for man was destined to conquer that nature. That tension of creation was tragically intensified by original sin which wounded nature in the depths of its being. Man rebelled against God and the flesh in man revolted against the spirit. And the effort of every human being—born infected and wounded—if he is to fulfil the end of his creation, has to be towards restoring the unity planned by God, a unity in which the spirit must harmoniously lead. " The human problem is not one of choosing between sense and spirit, but between the *domination* of the senses and the domination of the spirit. . . . The glory of Catholic thought is to be against nothing at all (unless it be the evil that is merely nothingness) but to be *for* everything—provided it accepts its place and its appropriate bounds."[3] As far as man's sexual powers are concerned, their reluctance to remain within their appropriate bounds has only been too evident from Genesis until to-day. The bounds—marriage or complete continence—were not observable except by God's help. With the coming of the God-Man that help became sacramental ; every marriage between His followers was to be henceforth a sacrament,

[1] *The Downside Review* for Autumn 1952 gives two articles on this book.
[2] *What God Has Joined Together.* By Gustave Thibon. London. Hollis & Carter. 10s. 6d. *Three To Get Married.* By Fulton J. Sheen. Dublin. Browne & Nolan. 13s. 6d.
[3] Thibon. *Op. cit.* p. 75.

a sign of efficacious aid. Man and woman will give each other grace, will give each other Christ : it takes three to get married. Marriage has multiple aspects : it is the authors' theme—the spiritualizing of sexual love by God's sacramental grace—that this article will develop.

Against even the theory of this spiritualization man has rebelled : here a score of heresies took their source ; and they know no bounds of time or place. There are Manicheans in Manhattan ; and Jansenists—they say—in Ireland ; and so numerous are the modern Albigensians that one almost believes in their doctrine of transmigration ! For their teaching, a ransom to asceticism, is always with us—if in a diluted form ; and a poison that acts slowly is the more dangerous for not causing violent convulsions that would demand a prompt remedy. Souls, they taught, came from God ; and the body from the evil principle. The flesh is the prison of the soul. Sex-intercourse which brings about that imprisoning is to be avoided : if it is to be practised, then concubinage is to be chosen rather than marriage, as being less stable. The inner circle, the " perfect ", the Cathartes, the pure were initiated in a special " sacrament ", the only one, called the *consolamentum*. Their solution for a spirituality of marriage was the radical one of denying all dignity and worth to the body and its acts. It led to gross excesses. The cathedral of Albi, built like a fortress to withstand the heretics' attacks, might have been designed as a symbol of the Church's marriage doctrine. Exteriorly the great rose-red fortress both awes and attracts as it bulks challengingly high above the Languedoc plain : but to enter it is to pass dramatically into a place of prayer that unites by some strange miracle of proportion the contrasting qualities of flamboyance and austerity. What Bernard de Castanet did seven hundred years ago when he planned his fortress church to combat and convert the Cathartes, the present Holy Father and his predecessor have done by their teaching on marriage—challenging as Albi's fortress-cathedral—yet peacefully composing around Christ on the altar a sacramental synthesis of austerity and joy.[1] That teaching is, of course, the traditional teaching of the Church in every age : but it places in a new and clearer light the purposes of marriage and the meaning and symbolism of the sacrament. It is from them, and not from Port Royal, that a true spirituality of marriage must take its source.

* * *

What do we mean by spirituality here ? For the word is a fluid one. Spirituality is an attitude towards God (not a pose !), a way of conducting

[1] *Casti Connubii*. Pius XI. 1930. That happy synthesis of austerity and joy has been particularly remarkable in the many addresses which the present Pope has made to newly married couples ; but above all in the two vigorous yet tender discourses to French fathers and Italian midwives—18 Sept. and 29 October 1951.

oneself before him, a way of using the particular gifts of his Creation to us so that we praise Him especially in them and lead them and ourselves back to him. So every Christian has the one spirituality : and yet no two have the same. For each one's attitude, while it may be a paltry thing, *is his own* ; and no one, not even Our Lady can replace my service to God if I omit it. She and others can *repair* my omission : it will not be my service. So no two states of life will have exactly the same spirituality. A proper spirituality of marriage then will develop strongly a sense of the married *vocation* ; it will judge its duties and its privileges by the divine purposes ; it will see all the events of married life, its joys and its sorrows, its moments of sex as well as its moments of spirit, in the light of the consecration of the wedding morning and in the hope of children to come. A plaster-cast sanctity then, straight from the repository ? A spiritual snobbery. A new sect of Cathartes, of holier-than-thous ? A droll and uncomfortable aping of convent or monastic life ? God forbid ! It was love the human couple consecrated to God—human love, with its roots in the earth even though its trunk and branches must grow towards heaven and carry there the glory of the root. The more they truly love each other, the more is God praised.

If in these pages we study more the root than the branches, it is because the real difficulty for many is to see the spiritual in sex. And the difficulty is vastly increased by all they see, hear and—one might almost say—breathe. The time is sexually out of joint. From Hollywood to Ballyscunnion the world we live in is quite sure of at least one scriptural text ; " Male and female He created them ". But seldom does it consider that it was to any good purpose. Frank Sheed puts it almost savagely in *Society and Sanity* : " The typical modern man practically never thinks about sex. He dreams of it, of course, by day and by night ; he craves for it ; he pictures it, is stimulated or depressed by it, slavers over it. But this frothing, steaming activity is not thinking ". The failure to think about sex, to see it from a spiritual angle can have two results. The marriage act will be regarded as something mean and furtive ; and if it shuns publicity and guards its secret, it is not—they think— because of its dignity, but only because of its shamefulness. Or it is regarded as a enjoyable intoxicating animal pleasure, which for some unknown reason becomes, from being bad, suddenly good. And marriage is seen simply as an authorization for licence. As Canon Leclercq uncompromisingly puts it : " the essential of marriage seems to be the permission not to be chaste ! " . . . This article then, no more than the books under review, has no brief for the hedonism of so many modern publications. The Pope's warning is clear enough : " Happiness in marriage is in direct proportion to the respect the couple have for each other, even in their intimate relations ". But neither lust nor ignorance seems a solid basis for respect : nor denunciation of " company-keeping " an

adequate preparation for Christian marriage. It is essential that a wholesome realistic spiritual attitude be developed towards sex and marriage. That will not be done in a day : it is the work of years in home and school and church. And, not infrequently, each looks to the other to perform it—and hopes that grace will obligingly depart from its normal process of building upon nature. *Miracula non sunt multiplicanda sine necessitate !*

* * *

It is romance not realism that has damaged so severely the ideal of marriage in the Western world. Only on realism can an ideal, a spirit be surely founded. And here the reality is that Almighty God " created them male and female " in order that their union might result in new life. The primary purpose of sex is the child ; that is the law of nature, the law of nature's Deviser. And God and nature are not mocked with impunity : five out of every six divorces are from childless marriages. It takes three to make a marriage—man and woman and God ; man and woman and the child. " That holds for every marriage, even if it is infertile : just as one can say of every eye that it is formed to see, even if in abnormal cases, through internal or external circumstances, it will never succeed in attaining to visual perception "[1] It is not a lessening of the dignity of marriage but rather a heightening of it that God should associate it with a task. God Himself married His Divinity to human nature " to serve—not to be served." Love and fecundity can never be disassociated ; it is God that has united them. " Love is found in deeds rather than in words "; in the birth and the nourishing and the training of children rather than in Solomon's song or all the sonnets of a Shakespeare. And love grows and is nourished by its appointed task ; for love is to give and its food is sacrifice not indulgence. *Sine dolore non vivitur in amore.*

This stressing of the value of the child would indeed be a sad puzzle for the human mind were he only just another cog in the machine, just another piece of cannon-fodder or of fuel for the ovens of some Naziism still to come. Each child is unique : fond parents are right in that ! Each is a desire of God far more than it is a desire of the parents ; each He creates in love, singly and separately. And each is destined in hope to be a member of Christ's Body here and for eternity. What a torrent of spirituality can, if the Christian couple have faith, take its origin from every cradle ! " Those who contract marriage can act only in the name of the divine Chief to whom they belong, for whom they, as His members, work ; they may not dispose of their bodies as a principle of generation except with Christ's consent and in His spirit, since this body is no longer their flesh, but the flesh of Christ. They can unite with one another only on the basis of their union with Christ "[2] Surely sex *is* sacred !

[1] Pius XII. Address to Italian Midwives.
[2] Scheeben. *The Mysteries of Christianity.*

Christianity has baptized *Eros* ; and even the poor earthy roots of our human nature have their own meed of glory since the " root of Jesse " flowered.

Once marriage's prime aim is acknowledged and held in practical honour, its secondary aim—the mutual aid and spiritual and human enrichment of the partners—is not only not lessened but immeasurably increased and exalted. The two aims, with their just subordination, have been wondrously merged by God, not only in the sexual union itself but also in the life-long mutually supported effort of man and wife. " What God hath joined together " modern scientific man has tried to sunder. He has sundered himself in the experiment ; he has cut the current from the lamp and the lamp has gone out ; like some wanton child he has severed the flower from the root ; the flower has withered in his hand and the root itself has rotted in the earth. And—final triumph of science and scientific love—he has destroyed the wondrous word ' home ', with all the undertones and overtones of warmth and human kindness that it has absorbed through the centuries and for it he has substituted the barren and cacophonous ' house '. Another name for the secondary end of marriage is the Home !

The life-long union of man and wife to found a home had something sacred in it even before the Incarnation. But with Christ's coming and by His will natural marriage was lifted into the realm of super-nature. That is what we mean when we say that every marriage between Christians is a " sacrament ". The sacrament then is not some sort of solemn blessing added to marriage ; it is *the marriage itself*. For all the other sacraments Christ invented signs to be carriers of holiness. In this one instance He used an already existing sign—natural marriage—the mutual exchange of wills, the mutual handing over of the marriage right for ever and to the partner alone. A sacrament as every schoolboy knows is " an outward sign instituted by Christ to give grace ". Perhaps even in manhood he is not too clear as to what the sign " signifies, symbolizes ". St Paul tells him and so extraordinary is the information that we should gasp in amazement. St Paul himself did. " This sacrament (' sign ' or ' mystery ') is great " he cries in wonder " I mean with reference to Christ and His Church." (Eph. v. : the epistle of the Nuptial Mass). The Incarnation—the union, the marriage of Christ with the Church sealed on the Cross—is *the* marriage, a love beyond all humanity's wildest dreams and hopes. " He is the husband " said St Augustine " she is the wife. They shall be two, it has been said, in one flesh." But symbolism alone does not make a sacrament. The sacrament must have a relation of efficacity with what it signifies. Here it is a participation in the mystery of the Christ-Church that is effected. Each Christian marriage is a particular instance of that tremendous union ; each takes on the quality of its unity and indissolubility. And as the particular instances multiply,

so the whole of humanity is, couple by couple, united to Christ its Head. The sacramental grace of marriage means a communication of the love-life of Christ and His Church flowing permanently—not merely on the wedding day—into the love-life of the Christian couple, giving them the power to imitate that love in theirs and to transform their joys and their sufferings, all the great moments and trifling details of the home into something approaching the divine. Is there any need to say that the bodily union of man and wife shares in this wondrous transfiguration? Is it just a biological function, a mere physical act or is it the making of two persons into one flesh in Christ? Is it a mating on the animal level or is it the uniting of two persons, of two Christians? The answer should be clear. On it depends in large manner the conduct of that action and the spiritualizing or demonizing of Christian marriage.

* * *

To reduce the act of sex to a mere physical act is to depersonalize both oneself and one's partner and to deprive the act of one of its all-important functions, that of being at once the sign and the source, the manifestation and the nourishment of an interior personal love. It is the substituting of the gift of a part of self for the gift of the whole: or more truly it is not a gift at all but a selfish grasping of an animal value in place of the paying of a debt of justice and an homage of love to another human being. It is to use another person as a means to self-gratification. True love—a love that is led by the spirit—" seeketh not its own " ; its aim will be the enrichment and happiness of the other. Never perhaps more than in this conjugal moment where the tower of the spirit is so threatened by the floods of sensuality is the saying of Christ more valid : He that loseth his life shall find it. The true meaning and joy of sex is hidden from the self-seeker ; communion on the mere level of instinct must bring to a human person loneliness and sad satiety. That the use of sex sometimes brings sadness—a fact misused at times by angelizing Christian moralists—need be true of the rational animal only when he has denied or debased his rationality or when his attitude to sex is prudish and warped. The sadness is the sadness of egotism—a sadness that is only doubled when it is a double egotism ; whereas it is the oneness in spirit symbolized and expressed by the oneness of flesh, both onenesses carried to their supreme dignity in symbolizing the unity of Christ and His Church, that is one of married love's greatest joys. But whether a solitary or a double egotism, the failure in consideration for the other partner at the very centre of marriage is a lack of true charity and therefore a hindrance and not an aid to the life of the spirit. To treat a person as a thing is a sin—even if it is not as such catalogued as a fault in our prayer-book lists of examination of conscience. Indeed to judge by many of these latter, adultery and onanism would seem to be the only feasible sins

against marriage. Humaneness seems to make slow ground in prayer-book catalogues ; but in the last year or two examinations of conscience for the married, published by American Jesuits and French Dominicans, in addition to the necessary stock questions make suggestions like this : " Have I made of the conjugal act a mere routine and not the expression of an ever-deepening love ? Have I considered that marriage did away with all problems of chastity ? Or on the other hand have I thought that the actions of marriage were inseparable from sin ? Have I in the conjugal act sought rather to satisfy my own carnal needs than to express love and mutual giving ? " Many marriages have been broken : many more limp miserably along—poor symbols alas ! of the Christ-Church relationship—that would have been saved from disaster and unchristian unloveliness by an enlightened use of Confession. But amelioration here is more than a question of just " going to Confession ".[1] It is a question of using our intellects also, of a long discipline of the senses and of proper preparation for marriage. If something in the nature of a noviceship is required for marriage as a whole, *some* preparation also is surely required for the carrying out of what is—contrary to the ideas of so much cheap erotic journalism[2]—an act that demands for its noble performance such a combination of natural and supernatural qualities, such an amalgam of tenderness and grace as will never be provided by mere animal instinct alone. To approach the deep and vital act of marriage without some awareness of the difficult physiological, psychological and spiritual problems involved is to run the risk of disunity and degradation. We are not just animals ; we are not even just rational animals ; we are rational animals in whom the Holy Spirit dwells.[3] " Grieve not the Holy Spirit of God " Who is the substantial Love of Father and Son and Who cannot but deplore " the expense of spirit in a waste of shame ". In the man it is, at the best, ignorance—at the worst, lust—to take no account of the woman's radically different approach to bodily union, to disregard her need for consideration and affection, to expect that days or weeks of coldness and indifference can, as if by miracle, be violently transmuted into warmth and love and to sacrifice the union given by a shared joy to a selfish and hurried moment of animal passion. A man who acts thus may be technically " chaste " ; but it is the chastity of the casuistry books and of " what is not forbidden ", and it degrades the body instead of elevating it. There is no reverence. For her part,

[1] " To recall laws and to demand material submission to them, without forming the judgement of those affected by them and without proposing at the same time appropriate remedies, can cause in certain lives irreparable damage ". A. M. Carré, O.P. *Théologie et Spiritualité Conjugale.* p. 6.

[2] The stacks of magazine mush for women brings to mind Tom Moore's : " My only books were women's books and folly's all they taught me ".

[3] " In matrimony, for the procreation of life, the Creator has destined human beings made of flesh and blood, endowed with minds and hearts : they are called as men, not as animals without reason, to be the makers of their descendants ". Pope Pius XII. Address to Midwives. Oct. 1951.

the woman—more sentimental than sensual—can err by making little effort to appreciate the more positive and physical quality of her husband's love and by displaying a false reserve which can vitiate the act of self-giving.[1] " They shall be as the angels " was said by Our Lord of the life to come. " If human love fails " writes Bishop Sheen " it is because it is short-circuited, not directed to a mutual incarnation of love but rather turned back on itself, where it dies of its own too-much ". And Father Oraison : " Each from genuine love should direct all his effort, attention and skill to seeking the enrichment of the other. For this the attitude of the entire being should be consciously orientated in the direction of an homage and a gift and not in that of an enslavement by the senses or the pride of an experienced technician. The nuance is a subtle one ; yet it distinguishes two profoundly divergent realities."[2] As with most of the failures in marriage it is once again a failure in the fundamental law of self-sacrifice. To the " exercitant " making the *Spiritual Exercises* and anxious to show his love for God St Ignatius of Loyola gives an austere norm : " For everyone must keep in mind that in all that concerns the spiritual life his progress will be in proportion to his surrender of self-love and of his own will and interests ". It is the law of life for all love—for human love no less than for divine.

* * *

But it cannot be said too often and too clearly that the proper use of marriage should lead gradually to an appeasement not to an unbridled heightening of the sexual instinct. It is meant to lead, in the process of time, to a spiritual love of man for woman and of woman for man ; and finally to a great love of the man and woman together for God. Married love was meant by the Author of marriage, Who " created them male and female ", to be an ascent to the heights, not a descent to Walpurgian depths nor a melancholy endurance of a life-long routine. Not to aim at this spiritualization is to eroticize marriage more and more. St Augustine, who " loved to be loved ", put it with his customary brevity : " He who is not spiritual even in his flesh turns fleshly in his spirit ". The seeking of carnal pleasure in season and out of season causes a permanent unbalance. " They will have the tribulation of the flesh " said St Paul. And, in his own language, the modern psychologist says the same. The advice given in *Casti Connubii* " to use the rights given them in marriage only in a Christian and worthy manner, especially in the early years of wedlock " may seem to some a hard saying. But it is based on God's sexual design for man ; and even Freud had some glimmering of it, however different his idea of sublimation from ours.

[1] Such a mock modesty is miles from reverence. " Reverence does not mean remoteness or exclude light-heartedness : two who reverence each other can play together. But it does mean a steady awareness in each that the other has a kinship with the eternal ". Sheed. *Society and Sanity*. p. 119.

[2] *Vie Chrétienne*. p. 175.

It is only the spirit that can save from deception that immensity of desire which the body awakens but can never satisfy. *Eros* must ascend or die : it must climb towards *Agape*, or perish. And as it climbs it will find, as does love of the divine, that there are different " mansions " : it too will have its purifyings and its dark nights and its aridities before the heights are reached. From sexual desire love must rise through sentiment to companionship. It is somewhere in this reciprocal period that a crisis—sometimes the main crisis of marriage—takes place. For some that crisis is fatal and there is a descent. Others continue to climb courageously over cliffs of fall to the unknown ; and, through darkness, reach transfiguration. It is the oblative spiritual period of love. The fleeting love of youth has taken on something of eternity :[1] " for ever wilt thou love and she be fair ".

A re-reading of Keat's Ode showed that quotation to be less felicitous than it seemed. For, while the sublimation of sex in Christian love means asceticism, it is no cold pastoral of marble men and maidens overwrought ! " Accordingly as the sexual instinct is *lived*, as it is employed by the personality, it can be the strongest manifestation of spiritual love or it can be the worst of its obstacles "[2] There is no question then—ordinarily—in marriage of renouncing and killing sex. Rather it is that the flesh has to be raised up in the ascent of the soul : the lower life must be assumed into the higher and participate in it : it must not be destroyed but restored on a higher level. The beginnings of love are mainly sexual—though rarely overtly so. It is the flesh which impregnates and directs the soul—almost ensnares it ; the affections are very much the " sensible affections " of the spiritual writers. Indeed in this matter of the affections the spiritual guide will soon find that the novice in marriage and the novice in religion are " sisters under the skin ". And too too often the change from idyll to reality is frighteningly hard or even impossible because of an adolescent training divorced almost entirely from reality. And so the one " goes home to mother " and the other " leaves the noviceship " !

This melting of the sweetness from the barbed hook is normally the first serious purification in marriage. It may come within the first year ; it will almost certainly come within the first decade. And it may recur alarmingly in middle life. The body pays toll to habit ; it has become used to affection and to affection's expression. Mentally, too, the thrill of discovery has ceased : close daily intimacy has exhausted the partner's resources (and so many couples have no intellectual or artistic interest) ;

[1] What of the love of man and wife after death ? " If conjugal love must cease at the same time as the end for which it was ordained on earth, nevertheless it could not but continue in the next life in the sense of what it has accomplished in the souls of married people by uniting them one to another in the greatest link of love which joins hearts to God and hearts between themselves ". Pope Pius XII in an audience to newly-weds. Quoted from Fr Carré's *Companions for Eternity*.

[2] Thibon. *op. cit.* p. 99.

and the children may, alas ! be more of a burthen than a bond. It sadly dawns on the disillusioned lover that what he married was an idealized projection of himself and not this very very real person. It is the crisis of marriage, the leitmotif of three fourths of modern drama and fiction.

* * *

" Those who do not purify their love generally resort at this point to one of five false solutions : (*a*) they seek a new partner to satisfy their egotisms ; (*b*) they decide to live apart ; (*c*) the husband absorbs himself in business and the wife in bridge ; (*d*) they resort to alcohol in an attempt to drive the conscious problem into unconsciousness ; (*e*) they consult a Freudian psychoanlyst who tells them to divorce and re-marry, or to repeat the problem all over again ".[1]

The true solution is in a spiritualization of love. To those with " the honied treasures of their bodies spent and no new life to show " that spiritualization will be extraordinarily difficult. To those who have fulfilled the primary end of marriage and have tasted the joys and seriously faced the responsibilities of parenthood and the family, it may be comparatively easy : for they will have gone to school to their children and learned some selflessness and some sense of responsibility to others. (On the shoulders of the indeliberately childless a purifying cross has already been placed ; but it has to be carried prayerfully ; and some form of spiritual parenthood—adoptions, for example, or the apostolate is necessary. There is no married Christian couple who cannot give children to God). For the purifying of love there must be no giving up, no turning back, no living on the memories of the buds of spring : " our to-morrows must never be botched-up yesterdays, they must be yesterdays transfigured ". Nor can the solution be an external facade of friendship with loneliness at the heart's core. A struggle, a hard fight must be manfully (or womanfully !) undertaken to love with *a love of the will* the partner *as he is,* with the sacramental aid of the " God of things as they are ". It is a cognate, a companion struggle to that of the priest who when the felt love of God and of prayer and of Mass has vanished must eat his Bread in dryness that his strength fail not in the darkness. Both priest and layman have in Baptism been conformed to the mystery of Christ's death so that by that conforming they may rise with Him ; and to each has been given a " sign ", a sacrament, a source of efficacious aid in the special circumstances of their peculiar struggle ; thanks to the sacraments, their struggle is the struggle of Christ—and *He is risen* ! and the dark night *does* lead to a transformation, to a transfiguring of love. For the married it leads to a willing of the other's good, to a loving of *the person,* and a loving of the person not merely in spite of his faults

[1] Sheen. p. 248.

but because of his faults ; and with it emotional love, changed yet the same, may often strangely return. It is the door to the light that the characters of Grahame Greene are groping for in their dark cells of morbid pity. It is the solution that the heroine of *The End of the Affair* half wants when she kisses Richard's deformed cheek or writes in her diary : " If I could love You, I could love Henry. God was made man. He was Henry with his astigmatism, Richard with his strawberry mark, not only Maurice. If I could love a leper's sores, couldn't I love the boringness of Henry ? " But there is no transfiguration—whatever the author's intention may have been. There is only an ersatz miracle and the blank final phrase : " I'm too tired and old to learn to love, leave me alone for ever ". How bathetic an ending compared with that of *The Power and the Glory!* " Too tired and too old to learn to love " is a favourite Mauriac-Greene theme ; they would seem to believe sexual love incapable of transfiguration ; they have many followers.

Gustave Thibon is not among them. The passage in which he sums up his position and makes it clear that he is preaching no vague Wagnerian angelism is worth quoting in its entirety :

> Suffering and dryness, by momentarily interrupting the animal pleasures of the flesh and the spiritual delight in self-assertion, lead lovers, not to a sexless union, but one in which the love of *persons* makes a fresh discovery of the attraction of sex. This sexuality is a kind of product of the soul. Balance is achieved, and the human synthesis of sexual love. The vague feeling, that instinct has, of its own immortal nature is based on the feeling of the immortality of the person, and this is the very essence of love. It is only then, incidentally, that *human* sexuality displays its true treasures. In every soul there are spiritual depths and subtleties that are conditioned by the difference of sex but crushed and blighted by a carnal overcharging of it. The materialising of sexual attraction has been very costly to sexual love. The attraction of sex is something very different from the love of a spiritual being endowed with sex. Whatever the apostles of the primacy of pleasure may say, a man cannot be fully sexual without first being fully personal, without being a man.

" *Et nunc Domine fac eos plenius benedicere te* ". " And now Lord give them cause to bless Thee more and more " prays their Mother the Church for the newly-married pair a moment after each has given Christ to the other. It is from the spiritualized love that we have been describing, and from the life-long striving for it, that man and wife will reach a great love of God for Himself, will attain the end for which He made them. *Ubi caritas et amor—agape and eros—Deus ibi est.* Is it because that spiritualizing of love is so hard that there are so few canonized married saints ? " I am sad because God is not loved " says the priest in Bernanos's *Diary of a Country Priest.* That sadness—to be expected in the heart of a priest—is often doubled by another sadness perhaps less to be anticipated. He is sad too because husbands and wives do not love each other, because

two who should be " one flesh " remain disparate and alone, and the flesh availeth nothing. Too often they seem to make the worst of both flesh and spirit, of this life and the life to come. But there is no facile solution : love remains the fruit of self-sacrifice. " Nor does long our small durance deal with *that* steep " ; *self*-sacrifice cannot long continue without *the* Sacrifice. It is no accidental stage direction that as Ann Boleyn and Divorce made their entry More and Fisher and the Mass made their exit ! So this brief survey of modern marriage spirituality ends where it began—and where Christian marriages begin—at the altar of the Eucharist. " The family that prays together stays together ". The family that draws the strength for self-sacrifice from Christ's continuing sacrifice amongst us cannot fail.

* * *

So far this article has been written impersonally (though it may be well doubted if any human being could write completely impersonally on marriage and sex—*tua res agitur*) : and Irish conditions have not been specifically envisaged. But could one write on these subjects in Ireland to-day without being aware of the charge of negativism and prudery that is more and more being brought against us ; and also of a certain un-Christian readiness to reply by labelling the critics hostile, un-Irish, ascendancy or just bad Catholics ?[1] A strong conviction about the importance of chastity—and it needs to be strong to-day—need not blind us to the primacy of charity ! Separating the sheep from the goats, the cockle from the wheat is so grave a task that the Lord has reserved it for Himself : and He is waiting " until the harvest ". Years ago when the famous pronouncement : " The Celt is going ; going with a vengeance " was first made, it was *The Times*' *Te Deum* for an act of God. To-day's warning that we are vanishing is our friends' *De Profundis* (premature we hope) for an act of man. But, they are " enemies " ? *Fas est et ab hoste*. . . . We would be wise to give both friends and enemies the charity of an objective hearing. The hope that much of the twentieth century's corruption has so far passed us by should not make us front-bench Pharisees : the belief that one is not as the rest of men is poison. Against it our laity have an antidote of their very own—to use to the full gratefully, positively and unselfishly the vast sacramental graces of marriage for the building up of the Body of Christ.

DONAL O'SULLIVAN

[1] But it is surely comforting to find *The Furrow* giving one of the Editors of *Dublin Opinion* space to ask : " Is our attitude to sex in Ireland healthy or unhealthy ? Is it firmly and properly rooted in pure religion or in something Calvinistic ? " See the issue of Dec. 1953 which also carries a comment on the article by the Professor of Moral Theology in Maynooth. There may also be some comfort in de Rougemont's remark : " The romantic idealization of love in modern times bringing with it a morbid prudery of language and manners, has undoubtedly a great deal to do with the sexual crisis from which the whole middle-class is suffering ". At least we are not alone. Denis de Rougemont has written a scholarly study of the Occidental idea of romantic passion and its effects.

# Astronomical Cosmology

## Part 2.

## THEORETICAL INVESTIGATIONS

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### 1. Introduction

AN attempt was made in a previous article[1] to summarize our knowledge of that part of the astronomical universe which is at present accessible to observation. Two facts appear to be of particular significance. The first concerns the distribution of matter in space : when we reach the realm of the nebulae, structure and complexity as we find them in the forms of individual galaxies, give way to overall uniformity. A minor amount of clustering apart, much the same number of nebulae per unit volume is found at any direction and at any distance from us.

The second fact concerns the state of motion within this realm of nebulae : though individual nebulae are found to move at random, a systematic expansion superimposed on their irregular movements, is observed whereby the whole realm opens out at a definite fixed rate.

Unfortunately, these two facts are not known quantitatively with the same degree of accuracy, and this limits greatly the extent to which any particular cosmological theory can be tested by the comparison of its results with observation.

The value for the rate of expansion is well determined out to distances of at least 500 million light years, but the figure for the average amount of matter per unit volume or the space density is still subject to considerable uncertainty.

It has been pointed out in the preceding article that, if we were to spread out uniformly all the matter which we see in the galaxies, we might expect to find one atom in a volume of about 10,000 litres within the observable region of the universe. The figure is uncertain, in itself because we do not yet know enough about the masses of the galaxies, and even more so because it does not include any such invisible matter as may be spread out tenuously in between the galaxies. The given figure cannot represent more than some lower limit to the mean space density of all matter in the universe. Some sort of upper limit can be estimated if we calculate how dense an intergalactic fog would have to be in order to be spotted through dimming effects on the light of distant nebulae. For this to happen, a density about 10,000 times greater than the lower limit, that is a density of about one atom per litre, appears

[1] *Studies* : Winter 1953.

to be necessary. There exists therefore a very considerable margin of uncertainty as regards the fundamental value of the true space density of matter.

It may be of interest to point out here that, if we adopt as a rough average a value for the mean space density of one atom per hundred litres—a figure often used in theory—we find that all the matter in the accessible region of the universe, that is within a sphere of 2,000 million light years' radius, would, if compressed to the density of water, fill a volume of only half a light year's radius ! This is just another way of saying that the universe is practically empty. It is this very emptiness, of course, which makes it possible for us to penetrate to distances of more than a thousand million light years.

## 2. The Peculiar Nature of Cosmological Theory

We now proceed to a discussion of what might be inferred from theoretical investigations about the structure of the universe as a whole and about its evolution. Any theory of the universe, worthy of consideration, must be built around concepts and laws which have proved their value in our investigation of its accessible part. However, the cosmological problem is of such a magnitude and transcends so much our limited experience that we cannot hope to solve it without a certain amount of speculation. The very extrapolation to the universe as a whole of concepts and physical laws as we find them " locally " represents in itself an assumption of a situation which need not necessarily hold.

Indeed this last fact has been experienced in the field of atomic physics where for the description of atomic structure classical " macro "-mechanics has to be replaced by quantum " micro "-mechanics. Further re-formulation of the laws of mechanics are likely to become necessary to account for the interaction of elementary particles inside atomic nuclei.

The introduction of special hypotheses does not therefore detract from the value of a cosmological theory, provided such hypotheses are reasonable—though sometimes it may well be difficult to be certain as to what is reasonable and what is not—and provided their number is kept as small as possible. Obviously, anything can be explained if we introduce a sufficient number of *ad hoc* assumptions. In short, the value of any theory may be gauged to some extent by the fewness of the special hypotheses it uses.

A number of cosmological theories of very different type have been proposed, whose results are expressed in terms of so-called " world models " which are representations of the fundamental properties of the whole universe and its supposed evolution. Due to the inadequacy of our present observational knowledge, it is difficult or impossible to choose categorically between them on the basis of agreements between

theory and observation. Nevertheless, they are not of equal interest, some of them being based on highly arbitrary hypotheses. As things are at present, there exists, in the opinion of the writer, one theory —that due chiefly to Canon Lemaître of Louvain and built on relativity theory—which deserves special consideration on the grounds that it is capable of explaining more simply than any other theory an appreciable number of disconnected facts.

It might be asked whether, in view of the wide scope it gives to speculation, cosmology can be called a legitimate branch of science. This doubt has been aggravated in many minds by the excessive claims which have been made by some cosmologists for their particular pet theories. In answer to this, it may be well to remember that cosmological speculations, apart from their natural fascination, have been responsible for many of the most interesting and important astronomical observations of the present century. Cosmology will retain its status as a science as long as new cosmological ideas continue to suggest to the observer fresh fields of exploration, while on the other hand carefully assessed observations restrain the theoretician from running after a mirage.

### 3. Pre-relativity Investigations. Olbers's Paradox and Related Problems

Since the days of Newton and until the time when the theory of general relativity introduced the picture of a finite universe into the discussion, it had been customary among scientists to consider space as infinite. Assuming an infinitely extended universe, however, two closely related problems presented themselves to the cosmologist. An infinitely extended universe means an infinite amount of matter, spread out into infinity, since otherwise, as Halley had pointed out already, gravitational forces would make the universe collapse. If then we are dealing with an infinite number of stars (or of nebulae, as we would say now when we speak of the constituents of the universe at large), and if these are distributed through the universe out into infinity, the night sky should not be black, but most intensely bright. The reason for this is simple : though the brightness of individual stars (nebulae) decreases with increasing distance from us, their numbers in corresponding volumes should mount at a more rapid rate, so that their combined light should be infinite. The fact that this is not so is known as " Olbers's paradox " after a famous German astronomer of the beginning of the nineteenth century.

Olbers tried to explain the paradox by assuming that the light of distant stars does not reach us in its totality on account of its being dimmed by interstellar matter. It can readily be shown, however,

that the problem cannot be solved so easily, and indeed that it is altogether insoluble as long as we assume that the universe is static, that means essentially unchanging with time. The assumption that there are no large-scale changes in the universe was a perfectly natural one in Olbers's day and remained legitimate until the discovery, some thirty years ago, of the systematic recession of the nebulae. With this new factor coming to light, Olbers's paradox fades out. In an expanding universe distant light sources contribute progressively less radiation to the whole on account of Doppler red-shifts.

It may be of interest to mention that Olbers's paradox could also be explained if, as we have good reason to believe, the universe is young, in which case we may expect to see distant nebulae in early stages of development or before their matter was condensed into luminous stars. This again would set a limit to the number of objects we could see.

The second problem, arising from the assumption of an infinite universe, concerns the question of gravitational forces. In the same way in which in Olbers's original paradox an infinite amount of radiation should be received at any point in such a universe, infinitely large gravitational forces should be exerted on any piece of matter anywhere as a result of the tremendous quantities of matter " at infinity ". It is hard to see how such forces, if they existed, could balance each other out sufficiently so as not to give rise to infinite accelerations and chaotic motion. The problem was frequently discussed towards the end of the last century, and it is interesting to recall that at the time Seeliger of Munich could see no way out of the difficulty short of an amendment to Newton's law of gravitation. We shall see later that in Einstein's model of a static universe there is actually introduced an effect of " cosmical repulsion " which counteracts that of gravitation at large distances.

In terms of classical Newtonian physics both the gravitational problem and Olbers's paradox are insoluble as long as we consider the universe to be static—unless we make a very special hypothesis about the space distribution of matter. For the sake of curiosity an assumption of this type may be mentioned here which was first introduced into the theory about thirty years ago by the Swedish astronomer Charlier, and which leads to what has often been called a " hierarchical " model universe.

Charlier investigated what would happen if matter in the universe were distributed not completely uniformly, but according to a certain pattern in which a number of units of a " lower order " form a unit of a " higher " one of larger size. If for instance a certain number of stars were to form star clusters, a certain number of clusters galaxies, a certain number of galaxies supergalaxies, and so on *ad infinitum*, and if the distances between the units of various orders were to increase more

rapidly than their respective dimensions, a position could be imagined in which the amount of matter in space decreases with increasing volume. As a result no infinitely large gravitational forces would exist at any point, nor would the night sky be infinitely bright, in spite of the fact that such an imaginary universe would contain an infinite amount of matter. However, Charlier's model, interesting though it be, is not realised in nature. While we do encounter units of different orders, their sequence breaks down at the stage of the galaxies which are distributed evenly without forming any further patterns.

## 4. World Models of Classical Newtonian Physics. The "Cosmological Principle"

From what has been said in the preceding paragraph it will have become clear that the idea of an infinite and static universe presents major difficulties, if we try to work out its implications within the framework of classical Newtonian physics. The assumption of a static universe was the only one which occurred to astronomers in the days before the discovery of the recession of the nebulae (around 1920), since the small observed motions of the stars were best interpreted as random movements. In view of our present knowledge the question may be asked, however, whether those theoretical difficulties may possibly disappear if we allow the structure of the universe to be variable with time.

This problem has been investigated within the last ten or twenty years by such astronomers as Heckmann, McCrea and Milne, whose work, though it follows in time that of relativity theory, is more logically discussed before that of Einstein and other relativity cosmologists. It is assumed then that the universe is infinitely extended and contains an infinite amount of matter. This matter is allowed to be in motion, assumed to be subject to gravitational forces and in its motion to obey the laws of classical mechanics. With these assumptions only the problem however remains too indefinite to allow of a definite solution.

At this point a particular hypothesis is introduced which may be called a principle of homogeneity, but which, used in various contexts, has come to be known as the "cosmological principle". In simple language and expressed in the most general terms, the principle represents the assumption that there is no preferential position in the universe. Applied to the phenomenon of matter in motion, the principle maintains that an observer anywhere in the universe should form the same picture not only of the momentary distribution of matter around him, given by its space density, but also of its state of motion. The introduction of the principle into the theory makes it possible to solve the problem mathematically. Calculation shows that a universe of this sort could not be at rest, in agreement with the conclusion reached in the last paragraph, but must be in a state of general homogeneous

contraction or expansion ; it must be a collapsing or exploding universe. The details of what the expansion or contraction would be like depend on whether what might be called the " energy of explosion " is greater than, equal to, or less than the energy of gravitation. In the first case an expansion, once started, would go on indefinitely until the average density of matter in the universe would be reduced to zero. In the second, the expansion would gradually slow down and finally stop altogether. In the third case an initial expansion would after a certain time revert into a contraction, at the end of which the universe would collapse completely. In other words, what had been indefinite in the original formulation of the problem, becomes clearly defined as the result of the introduction of the cosmological principle.

## 5. Relativistic Cosmology. Einstein's Static Model Universe

We proceed now to a discussion of what are perhaps the best known types of model universe, namely those which follow from an application to cosmology of the theory of general relativity. The model of classical Newtonian physics of the last paragraph suffers from a serious defect which becomes apparent when in addition to its mechanical also its optical properties are to be investigated. A question like that of the propagation of light in an expanding universe of matter presents considerable difficulties to classical physics, but can be discussed perfectly naturally in relativity theory where mass (of matter) and energy (of light) appear as two aspects of one and the same thing.

In classical Newtonian physics it had always been tacitly assumed that " space " which provides the background for the changing phenomena of nature, is something which is given a priori. The metric of space was generally assumed to be Euclidian, or in other words Euclid's laws such as that of the sum of the angles in a triangle, were thought to hold for any geometrical figure in the universe.

It is well known that one of Einstein's fundamentally new ideas concerned the geometry of space which he claimed to be non-Euclidian. The actual space around us is according to Einstein not " flat ", but " curved " or " spherical ". The possibility of various non-Euclidian geometries had been a favourite topic of mathematical speculation during the last century. The identification of one of such geometries with that of the space of physics, however, is entirely due to Einstein who in his theory linked up the curvature of space with the phenomenon of gravitation. Only in a universe devoid of all matter and therefore of all gravitational forces would the laws of Euclidian geometry hold strictly. Ordinarily, space is deformed wherever matter is present.

The introduction of curved space leads to the possibility of dispensing with the problem of the infinite which is such a stumbling block to

classical theory, because it becomes now perfectly logical to conceive of space not as infinite, but finite. It may be well to state, however, that the idea of a finite universe is by no means a necessary result of relativity theory, and indeed was in the course of time abandoned by Einstein himself. Quite a number of infinite model universes are conceivable also in relativity theory and have been studied in recent years. The fact remains, however, that in relativity theory a finite universe is possible, and to many would appear to be still the most satisfactory solution.

In its ordinary form Einstein's theory refers only to local curvature of space and to the way in which it varies according to the amount of matter present. In his early application of the theory to cosmology Einstein introduced an additional hypothesis—since dropped by him, but retained by most other cosmologists—namely that superimposed on the local curvature, there exists an overall curvature of space which makes it closed and finite.

The position may be illustrated by considering the example of a two-dimensional curved and closed space in the case of the surface of the Earth. Here mountains and valleys produce the local deformations on top of which there is the curvature which we mean when we say that the Earth is round. According to Einstein's early picture a similar roundness applies to the universe as a whole which becomes apparent once we have averaged out the local irregularities of curvature which are produced by gravitational fields in the neighbourhood of stars and nebulae. This overall curvature of the " spherical " universe can be described in terms of a radius of curvature, defined similarly to the radius of curvature of a two-dimensional surface. Whereas local curvature is determined by the local amount of matter, the " radius of the universe " is to be fixed (according to the theory) by the total amount of matter which the universe contains. The more matter there exists, the greater is the radius.

The idea of a finite universe has sometimes been felt as a difficulty by those who are not familiar with its exact meaning, and who are inclined to confuse the notions of limit and of boundary. The curved closed space of non-Euclidian geometry as used by Einstein is finite in the sense that it contains a definite volume, a definite number of cubic centimetres, but it has no boundary. There is no place where it ever comes to an end.

Closed space of one dimension may be represented by the points along a circle or any other closed curve. A one-dimensional being, living in such a space, would be able to walk round his universe without ever coming to an end. A two-dimensional being would have the same experience, say, on the surface of a sphere. In his closed universe he

would, moving straight ahead, return to the same point from which he started, but he would be able to walk on indefinitely. For him straight lines return into themselves, and such measurements as give the sum of the angles in a triangle, would lead him to results different from what they would be, if he lived in a flat, Euclidian, two-dimensional, infinite space, in other words a plane.

It is easy for mathematicians to extrapolate such considerations of the properties of one or two-dimensional curved space to those of three- or more dimensional space, though our imagination may not be able to follow them so readily. An observer, moving straight ahead in a three-dimensional curved universe, would once again find himself eventually back in the same spot. A ray of light would be able to travel right round the universe, and one and the same object would thus be visible to an observer from two opposite directions. The time it would take to complete one revolution, would obviously depend on the size or on the radius of the spherical universe.

Estimates for the actual value of the Einstein radius, varying between one and ten thousand million light years, have been given frequently on the basis of the observed mean space density of matter. They have hardly any significance, however, as in this form the whole theory is based on the assumption that the universe is static and therefore has a fixed radius. As we have seen earlier, the observed recession of the nebulae, which was unknown when Einstein first developed his theory, shows that fundamental assumption to be wrong. The original Einstein model is therefore inapplicable to the actual universe.

### 6. Eddington's and Lemaître's Non-Static World Models

A detailed discussion of the fundamental equations of the theory of general relativity has shown that Einstein's original solution is by no means the only possible one, and many relativity world models have now been investigated in which the radius of the universe, assumed to be spherical, is not constant but variable with time. Among the astronomers and mathematicians who have developed the theory during the period between about 1920 and 1940, pride of place should be given to the late Sir Arthur Eddington of Cambridge and to Canon Lemaître of Louvain, who only recently has been awarded the first Eddington Medal by the Royal Astronomical Society of London.

Einstein's static universe is supposed to be in a state of mechanical equilibrium which was achieved by the introduction into the theory of a new force, a cosmical repulsion, which, when large distances are concerned, is to balance out the gravitational attraction. It has been shown, however, by Lemaître and others that Einstein's universe, even if it were to exist at one particular moment, would be unstable. Its equilibrium is like that of a ball resting on the point of a pin ; the

smallest disturbance such as the agglomeration of matter anywhere would be sufficient to set the whole universe in motion. Such motion has been shown to lead to a contraction or expansion of the universe.

If the universe were to expand, it might do this in such a way that ultimately the density of matter in space would vanish altogether. Such a completely empty universe, the final stage of an expanding one, represents, strangely enough, the only other static solution of the fundamental equations of relativity theory. Known after a Dutch astronomer as a " de Sitter universe ", this solution was quite seriously discussed in the early 1920's, because it has the curious property that any piece of matter introduced into this empty universe would fly away from an observer with a velocity proportional to its distance, in other words behave exactly as the receding nebulae. At a time when Einstein's static universe represented the only other known solution of the relativity equations, de Sitter's model seemed to provide a chance of accounting for the nebular recessions which were beginning to be found. It appeared unfortunate, however, that de Sitter's model required the universe to be devoid of matter !

We now know that both the Einstein and de Sitter universes represent only singular and extreme solutions of the problem, and that there exists a great variety of non-static solutions according to which the universe may for instance first expand and then contract or vice versa, or may expand at a variable rate, or its radius may oscillate between a maximum and minimum value. Some of these theoretical possibilities have been investigated in considerable detail, the two most important solutions being connected with the names of Eddington and Lemaître.

According to Eddington the universe started from a homogeneous nebula in a state of equilibrium, in other words from an Einsteinian static universe. At some stage its equilibrium was disturbed by chance condensations of matter, and as a result the universe started to expand. The present large velocities of the nebulae indicate, according to Eddington, that gravitational forces which at the beginning retarded the expansion, are no longer an effective curb on it. In other words, the evolution of the universe is fairly far advanced, and its present radius is considerably larger than the Einstein radius of the original nebula.

While Eddington's model universe started as a tenuous nebula, Lemaître's is supposed to have begun as a most highly compressed ball of matter, a super- or " primeval atom " as he calls it. " At the beginning " all matter in the universe was contained within this atom, filling a volume with a radius not larger than the distance between Earth and Sun, but with a density as high as about 100 million tons per cubic centimetre. This atom was completely unstable, and from its

explosion followed the evolution of the universe. Its expansion was extremely rapid at the start until gravitational forces slowed it down so much that its radius only just reached the value of the Einstein radius. The expansion would have reverted into a contraction at this stage, or the universe would have fallen back on to itself, if the initial explosion had not supplied sufficient energy to push the expansion just beyond the Einstein state. Once this was passed, the universe could expand again and does so, like Eddington's, at an ever increasing rate.

Both Eddington's and Lemaître's model universes account therefore for the observed recessions of the nebulae. They explain these, however, not like Newtonian models in terms of actual nebular movements, but as the result of the " stretching " of the space between the nebulae. To give a well-known two-dimensional example, the nebulae in an expanding universe may be compared to points on a balloon which is being inflated. Though these points are " at rest " on the balloon, they recede from each other due to the inflation, and behave in exactly the same way as the nebulae which separate with velocities proportional to their distances apart.

The present state of motion in the universe is identical in both Eddington's and Lemaître's models, and if the recession of the galaxies were the only observed phenomenon to be explained, there would be no reason why preference should be given to one model rather than the other. The supposed existence of a primeval atom in Lemaître's theory, however, seems capable of explaining a variety of other phenomena as well.

In the first place, a super-dense state in the past is just what is required to understand the existence of heavy chemical elements which, as far as we know, under present conditions in the universe cannot be built up from lighter elements as e.g. is helium from hydrogen in the interior of the stars. It seems that they could readily be formed under conditions of density and pressure such as must have prevailed in the primeval atom. The argument becomes even more plausible when we consider that the age of the heavy chemical elements (as found by radioactivity) covers very much the same span which Lemaître's model indicates as having elapsed since the expansion started.

The existence of cosmic rays, whose enormous energies have not yet been satisfactorily accounted for, could also be possibly understood if they are looked upon as original fragments of the exploding primeval atom.

Lemaître has also drawn attention to the presence of clusters of nebulae which he considers vestiges of that phase in the evolution of the universe during which it passed through the critical Einstein state. Estimates of the overall density of matter in such clusters show this to be appreciably higher than in the universe at large, and to be of the

order of magnitude of what the mean space density ought to have been, according to theory, at the time when the universe was in the Einstein state. Figures for both the space density and the radius of the universe at that particular moment in its evolution can be derived on the basis of Lemaître's theory by working backwards from the present rate of expansion (using the observed recession of the nebulae). A density of one atom in about ten litres and a radius of about 2,000 million light years are found from such calculations. If we assume the present density of the universe to be about one atom in a hundred litres, it follows that the present radius is about two or three times larger than the Einstein radius, or in other words equal to about four or five thousand million light years.

In a similar way the total amount of matter which a universe of such a radius would contain is also readily worked out. The total mass is found to be of the order of the mass of 100,000 million galaxies such as our own, each consisting of about 100,000 million stars and more or less the same amount of interstellar matter. Considering the underlying uncertainties, particularly in the value of the space density, it need hardly be said, however, that these figures represent no more than pointers to the dimensions and material contents of our universe.

Rather more interesting results can be worked out on Lemaître's theory for the time scale of the universe. Starting again from the present rate of expansion and using the most recent observations of nebular recessions, one finds that a time of about three or four thousand million years must have elapsed since the expansion started. This figure differs only slightly from the one which follows from a simple extrapolation backwards of the observed recessions, assuming these to have been constant all the time. This latter figure for the " age of the universe " has been said already in the first article to be in good agreement with the ages of various constituents of the universe such as stars or galaxies. The same holds therefore for Lemaitre's theory.

We shall return to this point in a different connection, but perhaps it ought to be pointed out that there is reason to believe that events such as the formation of galaxies or the condensation of stars out of galaxies took place at an early stage of the evolution of the universe. It would appear reasonable therefore to compare the ages of galaxies or stars with the age of the whole universe.

Lemaître's model gives a remarkably satisfactory picture of the universe, and with the recent reassessment of nebular distances sets an age to the universe which is in excellent agreement with other observations. However, even before the new scale of nebular distances had been announced in 1952, and when the age of the universe derived from its expansion, seemed only half that of the oldest stars, astronomers, familiar with the limitations of the observational data, did not regard

this as a serious discrepancy. That the two figures were of the same order of magnitude was taken to be as good an agreement as could be hoped for in the circumstances. The fact that improved observations have made the agreement closer vindicates the attitude of such astronomers who have all along believed that the relativity theory of the expansion and particularly Lemaître's treatment of it has led us to an understanding of some fundamental properties of the universe at large.

### 7. The "New Cosmology" of Bondi, Gold and Hoyle

Some scientists, notably Bondi, Gold and Hoyle of Cambridge, have taken the view that the whole approach to cosmological theory as described in the preceding pages, was fundamentally incorrect. Their immediate reason for seeking a "new cosmology" was the apparent discrepancy, mentioned in the last paragraph, which then existed between the theoretical and observationally found ages of the universe. Their theory is based on the assumption that there is no real evolution in the universe, but that the universe is in a steady state or that its overall structure does not change with time. On such an assumption any evolutionary theory such as Lemaître's is bound to encounter fundamental difficulties.

In order to make the hypothetical steady state compatible with the observed opening out of the universe, Hoyle introduces a completely novel assumption, that of continuous creation, into the theory. Whereas all previous cosmologies had tacitly assumed that the material of the universe was provided once for all "at the beginning", matter, according to Hoyle, is being created continuously all the time. This creation is to take place at such a rate that whatever matter leaves any representative volume of space through recession, is replaced by matter newly created within the same volume. It is in fact this newly created matter which is responsible for the expansion of the universe. The rate at which matter would have to be created in order to account for the observed rate of expansion is found to be minute, namely only one atom per thousand litres every one or two million years. Such a rate could obviously never be detected by any instruments, so that, in practice at least, the law of conservation of matter which is one of the fundamental laws of Newtonian and relativity physics, would hold even in Hoyle's universe. Though the matter newly created in the form of individual atoms could not replace immediately that of the receding galaxies, it is supposed to keep up the supply of intergalactic matter out of which fresh galaxies are formed continuously.

The newly created matter, according to Hoyle, appears in the form of hydrogen atoms, which means that the universe is constantly being refuelled by hydrogen whose conversion into helium in the interiors of the stars is known as the principal source of energy for their radiation.

Whereas according to earlier theories the universe is running down towards a state when all the hydrogen will be exhausted and the stars will shine no longer, Hoyle's universe remains young all the time. On a broad scale, his steady state universe has always looked and will always look the same as it does now ; in other words it is infinite in time.

The hypothesis of continuous creation was introduced by Hoyle and his colleagues as a means of solving what to them seemed an otherwise insoluble problem. They are not concerned with the way in which the new hydrogen is formed, and would argue that this represents the same kind of mystery as the whereabouts of the receding galaxies which disappear when they reach the speed of light. All that matters to Hoyle is that the idea of continuous creation " works ".

However the question may well be asked whether it is really reasonable or desirable to introduce a hypothesis such as that of continuous creation, which is so much at variance with the basic principles of physics, and what is more important, for which there is no evidence of any sort in other fields of science. There can be little doubt that the apparent discrepancies between theory and observation which provoked the new cosmology, cannot be taken seriously, and that at the present state of our knowledge conservative cosmologies are capable of describing our data of observation in as satisfactory a manner as can be hoped for.

One might go even further and question whether the new theory does actually " work " in practice. This theory presupposes that any large volume of space anywhere contains the same proportion of young and old galaxies as a similar volume anywhere else, the reason being that new galaxies are assumed to be condensing all the time at random. If on the other hand the universe has a definite history and is progressing from a beginning to an end, distant regions of the universe should show objects in an earlier stage of their development than near ones. Any signs of systematic differences of age between near and distant nebulae would be sufficient to disprove Hoyle's theory immediately. There is indeed a strong possibility that observed systematic differences in colour between nebulae at different distances will come to be explained in terms of different age, but further observations will be necessary before the question can be settled finally.

## 8. Jordan's Cosmology. Cosmic and Atomic Constants

The idea that the amount of matter in the universe may vary with time, is not confined to Hoyle's theory of continuous creation, but has been postulated also by the German cosmologist Jordan. His theory is based on an approach entirely different from that of any " classical " cosmology. Its main arguments are to be described here, not because the theory provides a model universe superior or even equivalent to

Lemaître's, but as an illustration of how the problem can be tackled from a completely different angle.

Jordan's theory starts from ideas which had been advanced earlier by Dirac and Eddington, and which concern what might be called the fundamental constants of nature. The structure of the universe, which is considered finite, is to be characterized by three constants of length, time and mass. The constant of length is defined as the radius of the universe, which is identified with the distance at which the receding nebulae reach the velocity of light. The constant of time is taken to be the age of the universe as found from the rate of nebulae recession, and a unit of mass is introduced by way of the universal constant of gravitation and is identified with the total mass of matter within the finite universe.

Three similar constants are singled out for expressing fundamental properties in the realm of atoms. These are the radius of the electron, the time it would take light to traverse this radius, and the mass of the proton. Given these two sets of constants, though it is by no means clear why some of them have been selected rather than others, and using their numerical values as known from observation or experiment, it is found that the ratios of cosmic to atomic length and time come out to be essentially the same, and that the ratio of cosmic to atomic mass is equal to the square of this first ratio.

Such a behaviour is considered to be more than a coincidence and fundamentally significant. On this assumption the physical characteristics of the whole universe can be described in terms of the three atomic constants and the " cosmic to atomic ratio ". Eddington went even further and tried to derive the latter ratio quantitatively from atomic theory. From the radius of the electron he was thus able to calculate the radius of the universe as well as its mass or the total number of particles within it. This last step of Eddington's reasoning, however, has found little or no support from physicists or cosmologists.

It was first pointed out by Dirac of Cambridge that the ratio of the cosmic to atomic units of time must increase with time since the universe is getting older. Assuming that the given ratios are not fortuitous, it follows that the ratios of the units of length and mass should similarly vary with time. The radius of the universe should increase in proportion to time—this being in fact the explanation of the phenomenon of the expanding universe according to the theory—and its total mass should increase at a rate which is proportional to the square of the time. This is the reason why in Jordan's theory the mass of the universe must be getting larger. This continuous increase in mass does not represent, however, a creation out of nothing as in Hoyle's theory, but a conversion of energy into mass which maintains the total energy in the universe at a constant level. On this particular score,

therefore, Jordan's theory is less unorthodox than Hoyle's. Nevertheless, though we are quite familiar, for instance in the case of the atomic bomb, with the conversion of mass into energy, we have never witnessed so far the conversion of energy into matter.

According to Jordan the universe began four or five thousand million years ago from a pair of neutrons (uncharged elementary particles, equal in mass to the proton or the nucleus of the hydrogen atom). As these separated from each other, new particles came into existence, and this process progressed in such a way that, say, ten seconds after the " beginning " the universe contained a total mass about equal to that of the Moon and a radius as large as that of the Sun. As the universe evolved the new matter appeared at a higher rate and in larger units, and at the present moment, according to Jordan, the spontaneous appearance of supernovae is the visible result of the newly generated matter. These supernovae are objects which are observed to flare up suddenly to a brightness several hundred million times that which they retain after their explosion. Their frequency of occurrence, however, namely one supernova per galaxy every three hundred years, is too small to meet the requirements of Jordan's theory. For this reason as well as for the obvious weakness of its basic assumptions Jordan's ideas, though ingenious, are accepted by hardly any astronomers at present.

## 9. Milne's Kinematic Relativity

No account of modern cosmology would be complete without mentioning, at least briefly, the work which for twenty years engaged the mind of the late E. A. Milne of Oxford. Outside a narrow circle his theory of kinematical relativity has received little attention, but this is probably due more to its abstruseness than to any obvious flaws in its logical structure.

Milne's cosmology is based on a few relatively simple axioms concerning the phenomenon of motion, from which he derives purely deductively a picture of the universe and of the laws within it such as the law of gravitation. The expansion of the universe or, as Milne prefers to call it, Hubble's law of red-shifts in nebular spectra is laid down as one of these fundamental axioms and not, as in other cosmologies, as on observed phenomenon to be explained by theory. A cosmological principle, such as that described in paragraph 5, is also postulated, but is confined to observers who are in uniform linear motion relative to each other such as observers on different galaxies would be. This means that an event (described by its position in space and time), when recorded by an observer in one galaxy, will be described by observers on other galaxies in accordance with the laws of transformation of special relativity theory.

The underlying structure of the theory is undoubtedly highly artificial and its value lies not so much in its usefulness for explaining astronomical observations, which indeed is very limited, as in its analysis of apparently familiar concepts such as time, or phenomena such as gravitational attraction. Milne's discussion of time may be of particular interest here. For the measurement of time in his model universe Milne finds it necessary to use two different scales. One, that of ordinary or " dynamic " time, is that measured by the swinging of a pendulum or by the Earth's revolution round the Sun, and is, according to Milne, applicable only to " local " events relatively near our present epoch. The second, " kinematic " or " atomic " time, is the time marked out by atomic oscillations, as revealed in the form of spectral lines, and represents the fundamental time scale in which large-scale phenomena in the universe, such as the recession of the galaxies, ought to be measured. The two time scales are connected logarithmically, so that even if the two scales coincided at one particular moment, they would gradually diverge, one losing on the other at an ever increasing rate. This leads to curious results when we try to describe large scale events in terms of ordinary time. Whereas on the atomic time scale the nebulae recede and the universe expands, having started this expansion at a definite moment in the past, the same nebulae are stationary on the ordinary time scale ; there is no expansion, and time extends indefinitely into the past. The question of the beginning or origin of the universe has therefore to be defined carefully, if it is not to become meaningless. With Milne " the universe as a whole has no age and no size, only an age and a size when a particular observer is singled out in a particular stage of his experience."

The idea that there are two time scales in the universe is to Milne an explanation of such phenomena as the spiral structure of the nebulae. Matter emanating from their centres would only appear to revolve in closed orbits when measured on the short dynamic time scale. Recorded, as they are, on the kinematic scale, the closed orbits must turn into spirals. However, this is hardly the kind of explanation which would appeal to a cosmogonist who tries to understand the evolution of the nebulae.

In the early days of kinematic relativity the possibility of the existence of two different time scales did indeed appear to be of more than speculative interest, since two different figures for the age of the universe were then under discussion. The first of these was the well-known value obtained from nebular recessions, whereas the second, about thousand times larger, had been worked out by Jeans on the basis of the apparent ages of double stars. According to kinematic relativity both values could be equally correct, as the one was measured in terms of kinematic, the other in terms of dynamic time. However, Jeans'

" long time scale " has since proved to be fallacious, and indeed there is now no fundamental discrepancy between ages in the universe, irrespective of the method of determination.

## 10. Conclusions. General Implications

Surveying the various major cosmological theories of to-day, we would favour the type of model which Lemaître has proposed, as giving the most plausible representation of our knowledge to date.

We believe then that the material universe with all its present complexity had a definite beginning in time, and evolved from an initial primeval state in which matter existed under conditions completely unlike anything we experience now. We fix the beginning of our era at the moment when the original universe started its expansion, an epoch beyond which our present soundings do not reach.

Lemaître's picture of the early stages of development of the universe has been filled in by cosmogonical investigations by the German astronomer Von Weizsäcker and others, who have shown that irregular turbulent movements in the original expanding cloud can account for its disintegration into spinning fragments which later became galaxies. Detailed study has supplied quantitative values for the rotation and random movement as well as maximum and minimum values for the size and mass of these fragments which agree remarkably well with what we actually observe in the galaxies. It has furthermore been demonstrated that the galaxies as we know them now, consisting of stars and interstellar matter, are the result of the existence in the original gaseous fragments of small-scale turbulence which at a very early stage led to widespread and nearly simultaneous condensation into stars.

The formation of galaxies and stars is a one-way process in time like that of the expansion of the universe. The same applies to the evolution of individual stars which in using up their energy sources, will all cease to shine at a time, not infinitely far in the future, when, however, the expansion will presumably continue.

So far we have confined our discussion to the purely scientific aspect of astronomical cosmology. However, this is obviously a subject of significance in a much wider context, and having clarified the basic facts, we will now try to make a brief scrutiny of its more general implications.

The fact that modern research on the astronomical universe is indeed not only worthy of the serious consideration of the scientist, but is also of the greatest possible interest to the philosopher, has been clearly expressed by the Holy Father in two recent discourses to the Pontifical Academy of Sciences and to an International Congress of Astronomers in 1951 and 1952. The problem which immediately comes to mind in this connection, is that of the existence of God as

external Creator of the material universe, and it is on this point that the Holy Father dwells principally in the first of these addresses.

It may be illuminating as a starting point to see which conclusions in this respect some of the cosmologists themselves have drawn from their researches. Milne's last and posthumously published book, *Modern Cosmology and the Christian Idea of God,* is devoted entirely to this very problem. One can summarise his arguments by saying that to him the universe, being a rational one, logically demands the existence of a rational creator. Essentially, of course, this is nothing new : the value of the argument with Milne lies in his thorough analysis of the implications which he finds inherent automatically in the notion of a material universe, existing in space and time, and bound together by the " laws of nature ". Milne was satisfied that his model universe follows as an inevitable consequence from a few fundamental axioms, just as the field of ordinary geometry follows from the axioms of Euclid. This complete absence of arbitrariness of any sort led Milne to the idea —and here he overstepped himself as a cosmologist—that his universe is the only possible one which a rational Creator could have created. In creating any other universe, God would have made a square circle, something inherently impossible. Milne's conclusion therefore is tantamount to implying that we can know not only of the existence of the Creator, but also of His mode of creation, which is an obvious fallacy. To quote a distinguished reviewer of Milne's work :

> If one wishes to maintain the full Christian concept of God in harmony with the concept of so rigidly defined a universe, some limitation is necessary in the analogy between geometrical and physical law, so that at least God is left with the possibility of acting independently of, as well as through, physical law. No theory which for example would reduce the miraculous to a mathematical blunder, or to a contradiction in terms will satisfy.

Milne was undoubtedly spurred to reaching this extreme position by his anxiety to reconcile in every detail his sincere belief in God—he was a devout Anglican—with his own particular interpretation of the universe.

Another example of the way in which a scientist sometimes tries to draw general inferences from his scientific work to support what he believes already, is found in the case of Hoyle. In the last chapter of his well-known book on *The Nature of the Universe* Hoyle makes no secret of his non-belief in the Christian or, for that matter, any other religion. It is this preconviction—based on arguments so superficial that one is surprised to find them advanced seriously by a man of his intellectual ability—rather than his cosmological theory which makes him see the idea of continuous creation as one which dispenses with the problem of creation by God. The argument can hardly be accepted, however,

because any creation out of nothing, whether continuous or all at once, stands in need of an external creating agent. The assumption of continuous creation appears to most astronomers a *deus ex machina*, but whether it is or not, the idea does not in itself constitute an obstacle to a belief in a Creator. To an omnipotent Creator who not only created the universe, but keeps it in existence, continuous creation would be no more " difficult " than creation at a specific moment.

Amongst Catholics one sometimes finds the tendency to look on Lemaitre's relativity picture of the expanding universe which indicates an origin of the world at a fixed point in time, as a direct scientific proof for the Creation so and so many years ago ; it is as if at last we had come eye to eye with Genesis. The Holy Father's first discourse is sometimes quoted in support of such an attitude. Anyone who reads the Holy Father's words carefully, however, will find that the remarks on the beginning of the universe are made with reservation. As we have tried to show in these two articles, we have indeed reached a stage in our researches on the universe in which everything seems to point to a singular event in the past from which the world evolved, but the " beginning" postulated by the astronomer or cosmologist is the beginning of processes now observed in the universe, not the beginning of the existence of the universe itself.

Indeed even if we were absolutely certain on the reality of the expanding universe, it would be outside the realm of the cosmologist to identify the " beginning " in the physical theory with the instant of creation by God.

The question has also been asked sometimes whether modern astronomical cosmology which provides us with a picture of God's universe, so much vaster and more wonderful than anything which earlier thinkers could imagine, gives thus a better proof for God's existence than " a simple look at the world ". The answer is in the negative, of course. The proof for the existence of God from the existence of the universe as formulated by St Thomas, remains essentially the same, but to quote the Holy Father :

> If the primitive experience of the ancients could provide human reason with sufficient arguments to demonstrate the existence of God, then with the expanding and deepening of the field of human experiments, the vestiges of the Eternal One are discernible in the visible world in ever more striking and clearer light.

There is another angle from which we may look at modern cosmology, and which the Holy Father has stressed in his discourse to the astronomers. When as in modern astronomy man's insignificance on the material plane is shown up in such an overwhelming fashion, the attainment of our knowledge of the universe is all the more striking

evidence for the superiority of the mind of man over the world of matter. On this point and in conclusion we can do no better than quote once again some passages from the second address of the Holy Father :

> What numbers, what dimensions, what distances in space and time ! How small man himself appears in this majestic expansion of space and time, just like a microscopic particle of dust lost in the immensity of the universe ! And yet that which especially strikes one who gazes at this picture of the universe, which is the fruit of long and laborious researches not of just one individual, but rather of entire generations of scholars, belonging to the most diverse nations, is not only the gigantic mass of the whole and of its parts, nor merely the harmony of their movements in space, but also the wonders accomplished by the human spirit in unveiling this vast cosmic panorama. Though man is essentially bound within the narrow limits of bodily conditions, he has exceeded every expectation that the limited power of the human senses at first sight could promise him, and with his intelligence has succeeded in mastering the immense universe . . . .
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> What thing is then this spirit of infinitesimal man, physically lost on the ocean of the universe, but daring to ask his extremely limited senses to discover the countenance and the history of the boundless universe, and then succeeding in revealing both of them ? Only one answer, strikingly evident, can be given, and that is : the spirit of man belongs to an order of being, essentially different from, and superior to, that of matter. . . .
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> Both happy and transcendent is the meeting of this human spirit and the Spirit of the Creator, a meeting made possible by the contemplation of the cosmos.

H. A. Brück

# Responsibility in Society[1]

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IT is undeniable that confusion and doubt are frequently found among Catholics as to the responsibilities proper to the state. They experience both the *dubium iuris* and the *dubium facti*, doubt about the principles involved and doubt about their correct application to the facts. Now of course about the correct application of principles there may be a certain irreducible surd of doubt. It is in this sense that we may accept Aristotle's admonition not to expect mathematical certitude in the practical science of morals. But doubt about the principles themselves, their identity, certitude, and obligatoriness, is less excusable. The present essay argues that there are certain clear principles morally obliging the state in its interventions in the lives of citizens, and that it is incorrect to regard social philosophy merely as a number of counsels of social perfection, or as a series of exhortations to avoid the socially ' undesirable '. A preliminary consideration of certain implications of the very notion of responsibility ultimately casts a special light on the scope of the state's obligations. In addition to realize that these obligations are part of a system of responsibilities is equally important. The reader is therefore warned that the first part of this essay concerns the general anatomy of responsibility, but he is asked to allow himself to be comforted by the promise that some flesh is put on the bones in the latter part.

## 1. Responsibility in General

Responsibility is a type of necessity. It is that absolute necessity which is imposed by God's law on man and is commonly called duty or obligation. To say that it is absolute means that in a certain sense it is inescapable. A man's duties are not created by his personal opinions or tastes ; nor do they depend, as Oliver Wendell Holmes believed, on the tastes peculiar to his social environment. Whether a married couple like it or not, their marriage is indissoluble. Whether a citizen knows it or not, he is bound to obey lawful and just authority. In other words the moral law has an objective existence of its own. Responsibility is inescapable in this further sense, that a person may not arbitrarily ' shrug it off ' and leave its fulfilment in the hands of another. Action of this kind is not liable to occur where the responsibility immediately concerns God or our own souls. Men are not ordinarily tempted to

[1] The substance of a talk given at the Dublin Diocesan Social Week, held at Holy Cross College, Clonliffe, in June 1952.

imagine that they can place on the shoulders of another their duty of acknowledging God's existence and lordship, or their duty of self-control. But the attempt to dodge and pass on or ' delegate ' responsibility is liable to happen where it immediately concerns a man's own material well-being or the well-being, material or spiritual, of another. When someone acts in this way we describe him as irresponsible. We blame him. A man for instance has the duty of ensuring as far as possible his own livelihood. The man who shirks employment and lives on the means of others is regarded not merely as a social menace but also as demoralized in character. The cadger is universally condemned. The truth is that this flouting of the responsibility towards his own material well-being inevitably affects his moral well-being. All his responsibilities are moral. All of them either directly or indirectly have to do with his soul.

Thus a similar inexorable quality appears in our duties towards others. True, it is possible to carry out a duty towards another through a third party. If A owes B £10, the debt is paid when C generously contributes the money on A's behalf. But apart from the new responsibility of justice or gratitude which then arises for the original subject of the responsibility, there are limits to the legitimacy of such delegation itself. One may not freely choose to delegate someone who in fact cannot effectively discharge the duty, or whose assumption of the task will hamper him in carrying out his own tasks. No conscientious doctor would freely assign his nurse to treat a patient whose condition required the attendance of both doctor and nurse. Nor may a duty to another be handed over if doing so is so unnecessary, so devoid of virtuous motive, that it constitutes a serious threat to the subject's general sense of responsibility. The action of a mother who leaves the rearing of her child entirely in the hands of a nurse so as to have more time for amusement might easily infringe this principle. Again a particular system of state subventions might spread among parents the custom of unnecessarily whittling down the scope of their responsibilities. Such a custom would surely threaten the general respect for moral obligation among citizens. It is the peculiarity of one's duty to another that it is designed by God to perfect both giver and receiver. Arbitrarily to forego this perfection of giving in a radical and extensive way is in some measure to court moral disaster. It is impossible to stand still morally. In effect one must either go forward or backwards. ' The unique subject of every kind of activity is man himself, whose free and deliberate acts cannot escape moral evaluation '[1]. A factor which does extinguish responsibility, however, is inability. In the concrete a person cannot be bound to do what circumstances have made impossible. At the same time he remains bound to strive to recover his power to do the action in question. A man thrown out of work by an economic

[1] His Holiness Pope Pius XII's Broadcast Message on ' The Christian Conscience as an object of Education ', 23 March 1952, *Catholic Documents, VIII* (Salesian Press : London), p. 6.

slump cannot be accused of neglecting his family when he has no money to buy them bread. He may be accused of irresponsibility if by giving in to despair he makes no effort to gain alternative work, or if with Mr Micawber's optimism he passively waits for something to turn up.

From these considerations emerges the truth that responsibility is no harsh and cramping limitation on our well-being, our freedom and our happiness. Rather do we reach out and grasp these values by doing our duty. The highest well-being of man is the perfection of his spirit. True freedom is self-mastery ; the phrase ' a slave to duty ' is a hyperbolic misnomer. The fulfilment of responsibility is self-fulfilment. The neglect of it spells frustration, insecurity and unhappiness.

## 2. The Distribution of Responsibility

Modern totalitarian philosophy and its counterparts in previous centuries have deified political authority. This authority is regarded as the ultimate source of responsibilities. ' The state ' decides how society is to be organized and how responsibilities are to be allocated. There is no appeal from its sovereign decision to a higher unchangeable law. It supplies the master plan of society. There is no higher plan according to which it must pattern its schemes. Christian philosophy on the other hand asserts that there is such a higher law or plan. This is the plan according to which God created human nature and as known by human reason it is called the natural moral law. Reason discovers it by examining human nature in the light of experience, and the findings are reinforced and clarified by the supernatural teaching authority of the Church. God's authoritative plan implanted in man's nature the need for other men. It did not leave that need wholly indeterminate. God made the human being a person and He inclined his nature towards certain forms of society. Thereby God indicated the basic units of human association and laid down the proper distribution of responsibility among these units. These units are the person, the family, the occupational or vocational group and ' the state ' or political community ; this community embraces all the previous units and possesses a government charged with the care of the common good. Responsibility is divided into correspondingly different fields. Each type of unit has a natural function proper to itself and thus each has a duty or field of responsibility proper to itself. In any plan worthy of the name there is an order, and in any order there is a primary unit, a unit which holds the first and most eminent place, the places of the other units being determined by their relation to the foremost unit. In the divinely planned order of society the primary and decisive unit is the person. All the social units, all the groups, large or small, are made up of persons. No group can act without their co-operation. Moreover all the groups exist for the good of

the persons who compose them. The human person is the most precious being in our created universe. He has no peer because he alone is rational and free. Of all creatures he alone can know and love his Maker. Among the values of our finite universe his perfection as a person is the highest.

So it is that he who is first and irreplaceable in value is also the first and irreplaceable bearer of responsibility. Among the fields of responsibility none is as significant as his. On him duty rests most heavily. Nobody is as responsible for the well-being of the person, once he is matured, as the person himself—neither his family, nor his profession, nor his trade union, nor the state, nor even the Church. Herein is found the source of the loneliness which lies at the heart of human experience. For when all is said and done, to be human is to carry one's burdens alone. This is the truth which the Existentialists have seized, isolated and distorted. So it is too that the responsibilities of the natural groups which surround the person are all towards the person. Their duty can be put very simply : it is to help him to fulfil his. Their function is subsidiary. This doctrine of the unique importance of human personality has been underlined time and time again by the Holy Father. It was asserted with particular force in his Christmas Eve Allocutions, 1952 and 1953, when he warned the world against the mechanization of society and the de-personalization of man. Nor is this a selfish doctrine which takes no account of a common good of the group. Part of the person's perfection or duty consists in co-operating with others, striving for their good. The common good is no mystical entity separable from the good of the members. It is not an altar on which the good of the members is immolated. Rather is it the good of each and every member, interpreted comprehensively. The person's good consists both in giving and in getting. Indeed it is more blessed to give than to receive.[1]

The natural law also assigns to each of the subsidiary or group units the sphere in which it is to help the person. Their due places are identified by examining more closely the relation of all of them to the person and by inferring the consequent relation of each to the other. Since all exist to help him, it is only when he is unable to do something necessary for his development that a group may step in. The help given must be

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[1] ' In fact, marriage and the family, the State and private property, tend of their very nature to form man as a person, to protect and render him capable of contributing through his own voluntary co-operation and personal responsibility to the likewise personal life and development of human relations. The creative wisdom of God is therefore alien to that system of impersonal unity which strikes at the human person, who is the origin and the end of society and in the depths of his being the image of God. . . . In some countries the modern State is becoming a gigantic administrative machine. It extends its influence over almost every phase of life, it would bring under its administration the entire gamut of political, economic, social and intellectual life from birth to death. No wonder then if, in this impersonal atmosphere, respect for the common good becomes dormant in the conscience of individuals and the State loses more and more its primary character of a community of morally responsible citizens '. (Papal Allocution of Christmas Eve, 1952 ; see *The Tablet*, 3 January, 1953, pp. 16–17).

proportioned to his inadequacy, not in excess of it. When the action of any group exceeds this intrinsically subsidiary function the plan of society is upset and the person is not helped but rather harmed. For then he is prevented from using his meed of ability to fulfil his responsibility and in this fulfilment lies his essential development. Some applications of these principles are very familiar. We reject as harmful and morally wrong the idea of coddling our children by doing for them what they can very well do for themselves. We recoil from the idea of dispensing them from their duties. We say that this attitude spoils the child. Why then should we minimize or doubt the harmfulness, the wrongness of unnecessary state intervention? Two vital principles about the relation of the groups to one another must be remembered. First, the larger group may intervene to help the person only when the powers of the smaller group to do this are inadequate. Only then does the duty of the larger group arise ; for only then does the duty of the smaller group cease to impose itself. Secondly, the larger group in its licit intervention must as far as possible act through the medium of the smaller group. Thus, for instance, one way in which the state can try to raise the standard of living in a community is to multiply its direct helps to the individual citizens in the form of governmental social services. This is no substitute for the more basic work of doing everything possible to stimulate the productivity of the country's industries. When these principles are violated the plan of society is again disturbed ; for then the smaller group is prevented from using its meed of ability to fulfil its responsibility, and in the long run the development of the members who make up the smaller group is injured.

The inadequacy of one unit in society then is the genuine signal for the intervention of another. But here it is necessary to make a distinction. There are two kinds of inadequacy, either of which justifies the intervention. One is normal and reflects the natural limitations of the person or group. An infant cannot look after its own life. A child is unable properly to educate itself. There are some dangers to decent employment which the single person or single family is unable to ward off, no matter how hard they try. It requires the power of a vocational organization to secure their protection. No organization but that of the state can deal adequately with crime or the spread of immoral literature. On the other hand there is abnormal or extrinsic inadequacy, which is relative to the special contingent circumstances of a particular person or group of persons. A homicidal lunatic is incapable of respecting his social obligations. An invalid father is not in a position to do what fathers normally can do, provide for his family. Due to the absence or immaturity of vocational organization, state legislation may be necessary to promote industrial peace and regulate production, laying down for instance minimum conditions of safety and health in factory work.

### 3. The State's Field of Responsibility, Considered in Particular

The reason why the natural law forbids the state to enter a domain in which its action is unnecessary is therefore no mystery. To enter such a domain is no part of the mandate *to help* which it has received from the natural law. It may not volunteer to exceed that mandate, because to do so would be to do harm. If the citizens for their part invite the state to do so they ignore the inescapable character of their moral responsibilities. The state is naturally fitted to operate in a certain field, that in which the individual and the smaller groups are inadequate. If it consents to step outside that field, not only is it liable to act with bureaucratic inefficiency and to be hampered in performing its own proper tasks, but it takes a hand in the demoralization of the citizens and to that extent frustrates its true end. The good which the state is commanded to seek is that of rational free beings. Consequently that good is principally something immaterial and only secondarily material. ' Reason more than anything else *is* man ', said Aristotle in his *Nicomachean Ethics* (X, 7) and the medieval scholastics made the statement a *locus classicus*. The fact that a state does go beyond its rights and that sometimes perforce its action may have to be tolerated does not obliterate the objective wrongness of its attitude. Ignorance of the moral truth in this matter may excuse the state or the citizens from blame but it does not annul the truth. It follows that in the solution of concrete problems of state intervention the two broad ethical norms always to be respected are the principle of ' subsidiary function ' and that of the primacy of the spiritual in human well-being. It is to a comment on some implications of these principles that the remainder of this article is devoted. I wish to indicate some of the questions which the state must ask itself in determining its duty to intervene, and to suggest that certain familiar political attitudes sometimes take insufficient account of the primacy of the spiritual in human life.

To establish in concrete cases the precise duty of the state certain questions must be answered. Firstly, what section or sections of the community need help ? Secondly, what degree of help do they need ? Thirdly, is it a fact that no organization other than the government can remedy the situation ? Now of course where the answer is that the state *is* the only competent agency and that the inadequacy in question is normal and intrinsic, no further enquiry is necessary. The state may and should intervene to the extent demanded. For example only the state can defend the community against a foreign aggressor and when aggression threatens, the state must take appropriate action. But where the inadequacy is relative to special contingent circumstances this further question must be answered : what is the method of remedying the inadequacy of the smaller units of society which is best adapted for encouraging their progress towards adequacy ? What method of helping

them will safeguard and promote their consciousness of their own responsibility ? For the aim must be to enable them, not further to disable them. The effort must be to raise them to the level of ability to carry out their responsibility, not to perpetuate them in disability. They must be rehabilitated. Their activity must be supplemented, not supplanted. Systems of social insurance, for instance, are based on this principle of supplementing. In their *Program for Social Reconstruction* of 1919 the American bishops went so far as to qualify their endorsement of social insurance by insisting that legal minimum wages should be ultimately high enough to make possible that amount of saving which is necessary to protect the worker and his family against sickness, accident, disability and old age ; it was only pending the time when this level would be reached that social insurance was an acceptable expedient.

It is sometimes said that the state should establish ' minimum standards ' of living and opportunity for all its citizens. This is true in the sense that the state should see that no citizen lacks the necessities for a decent human life through the adversity of circumstances outside his control and the control of the smaller social units. In its provisions against this kind of want it should show equal solicitude for all its citizens. If necessary it must supplement the efforts of vocational bodies in order to bring about a structure of society in which there is equality of opportunity for equality of natural aptitudes. The ideal should be a social situation in which the cultural and financial limitations of a family would be no insuperable barrier to a child's success in developing its proven talents. A person's ability to expand his trade should not be blocked by the selfish exclusiveness of others who have already done very well for themselves and on principle oppose the appearance of new competitors. Christian social teaching upholds the view that there must always be disparity of material possessions between men, because of the inevitable disparity of talent and of power to be of service to the community. But it is no part of this teaching to hold that the common good necessarily demands immutability in the economic stratification of society, and that a man should never hope to rise above the stratum into which he is thrust by his birth. Society exists to help the human person to liberate his powers, not to imprison them. The political aim of ' minimum standards for all ' is however false if it is taken to imply that men as men have a natural right, antecedent to any effort on their part, to get from the state a certain minimum of food, clothing, housing, medical care, education and recreation. This view ignores the true distribution of responsibility in society.

A failure to recognize the primacy of the spirit in man seems sometimes to inhere in two quite prevalent notions : (1) the notion that when the state has the right and duty to give it also has the right to determine the manner of giving, (2) the notion that whereas the Church's concern

is with a man's spiritual good, that of the state is with his material good. Like many other generalisations these statements are ambiguous.

' When the state has the right to give it may also decide the manner of giving '.

Here I wish to point out that even when the state pays the piper the variety of tunes which it may call is limited. A government which has to intervene will often be faced with several alternative ways of intervening, each of which is morally permissible. Administrators have the function of discovering the most practical scheme and working out the details. But there are also ways of intervening which are morally wrong. Each human person has a responsibility to look after himself. Man must fight hunger, dirt, disease and accident ; and he must possess himself of property in order to do so. Two types of value or good are obtained by carrying out this duty. There is the material value of property, and there is the superior immaterial value which consists in the moral perfection of the human spirit which obeys this divine command. Where the resources of the citizens themselves are insufficient and where the help of the state is plainly necessary, the state may nevertheless act in the wrong way. It may supply the material value which is wealth, but supply it in such a way as to blunt the individual's appreciation of the superior immaterial value which is won by making every personal effort to do his duty. The state will make this mistake if when helping him it neglects to enlist his active co-operation, if it neglects to stimulate his own powers, in a word, if it supplants instead of supplementing. This could happen for instance by a misinterpretation of the state's important duty to watch the rate of saving in the community as well as the rate and direction of investment. This function of supervision may not be approached with the doctrinaire assumption that the only way of carrying it out is by taxation and the investment of the funds so accumulated in enterprises instituted and owned by the state. The duty of supervision is not equivalent to the duty of actual saving and investing. The latter duty rests firstly on what I have called ' the smaller units of society '. State saving and enterprise are justified to the extent that the independent efforts of these units, even when stimulated by the state, are inadequate. A fairly common argument used to support certain types of governmental social service is the following : ' We the citizens pay the state in taxation. The state in return gives us the services which see to the education and health of our children and the comfort of our old people. It is a fair bargain.' The trouble is that the citizens do not necessarily fulfil their duties towards others by paying the state to perform them. The bargain may be illicit. From the side of the citizens, it is illicit if they neglect to respect the limits within which the delegation of responsibility is permissible. A government which co-operates with this neglect is exceeding its subsidiary function.

All these considerations complicate matters for the administrative planner, who often shares with the rest of humanity a certain liking for simplicity. He can but reflect that it is much easier to make plans for the care of trees or animals or public monuments than for the care of men, and console himself with the thought of the special nobility of the latter task.

'Whereas the Church's concern is with a man's spiritual good, that of the state is with his material good'.

Strictly interpreted, this statement is *simpliste*. You cannot, so to speak, divide a man's being down the middle. In offering this criticism one is not laid open to the objection of crassly identifying Church and state. The truth is that both must aim at helping man towards the perfection of his spirit, but that the spheres in which they are to work for this goal are distinct. That of the Church is the supernatural, that of the state is the natural. The Church works for it in a singularly powerful and intimate way by its divine teaching on faith and morals and its divine sacraments. The state works for it in a less efficacious but no less necessary way by helping men to grapple with those exterior, material, natural circumstances in the responsible use of which consists their perfection and salvation. Its laws help to create an exterior *milieu* in which the citizens may fulfil their responsibilities and by that very fact the state ensures a certain initial, external level of morality. To take a very primitive example, the law against murder not merely protects the lives of citizens ; it also prevents potential murders from indulging in that piece of irresponsibility. Of potential evil-doers in general, St Thomas says :

> When they are thus prevented from doing evil, a quiet life is assured to the rest of the community ; and they are themselves drawn eventually, by force of habit, to do voluntarily what once they did only out of fear, and so to practise virtue. Such discipline which compels under fear of penalty is the discipline of law. Thus the enactment of laws was necessary to the peaceful and virtuous life of men' (*Summa Theologica*, Ia IIae, 95, 1).[1]

There is then no force in the further objection that the state's greatest preoccupation is with economics. This merely shows that its preoccupation is different from that of the Church and that economic problems are very difficult. It does not show that the end of the state is economic prosperity. Nor is there any force in the additional objection that since the state is legitimately preoccupied with material things, there is no need that it should constantly remind itself that material things are not its ultimate goal. If it forgets the primacy of the spiritual it may, as I have pointed out, remedy material evils to the detriment of man's

[1] See *Aquinas : Selected Political Writings*, edited with an introduction by A. P. D'Entrèves, trans. by J. G. Dawson, (Oxford, 1948), p. 129.

soul. What is sometimes ignored in practice is the true nature of the common good which the state should promote. The common good is the good of each and every member of the state, and the chief or principal element in the good of each is the virtue of each, his development as free and rational, his self-fulfilment. This self-fulfilment consists in the implementing of his responsibilities as a human person in his own peculiar circumstances. Material things, food, health, money, are merely the instruments towards this end. If the state is there to help him its action must be for the same end. It would be inaccurate to think that St Thomas had his head in the clouds when he said that the end of the political community is the virtue of its members[1]. For the state *must* take cognisance of the inner human shrine of heart and mind ; of man's affections ; his higher aspirations ; his bravery ; his ambitions ; his desire to have a motive, to know what he is doing, why he is doing it, and how best to do it ; his power to bring order and design out of jumbled chaos ; his power of judgment and choice ; or to sum up all these things, his power to initiate. The state is morally responsible and it is responsible primarily not to the people but to the law of God. Neither the natural moral law nor the Christian supernatural law is a series of " do's " and " dont's " within the limits of which men may set out simply to have a good time. The first principle of both laws is that men may not make the production or enjoyment of material things the dominant end.

CONOR MARTIN

[1] See, e.g., his *De Regimine Principum*, I, c. 14.

# Russian or American Star

*by* THE REVEREND P. J. MCLAUGHLIN, D.SC.

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> If any town should engage in rebellion or mutiny . . . the king has two methods of reducing them to obedience. The first and the mildest course is by keeping the island hovering over such a town and the lands about it, whereby he can deprive them of the benefit of the sun and the rain, and consequently afflict the inhabitants with dearth and diseases : and if the crime deserve it, they are at the same time pelted from above with great stones . . . But if they still continue obstinate . . . he proceeds to the last remedy, by letting the island drop directly upon their heads, which makes a universal destruction both of houses and men.—Swift's *Gulliver's Travels : A Voyage to Laputa.*

Not long ago the Russian magazine *Ogonek* predicted that the Soviet flag will be raised on the moon before the end of the present century. Recently a writer in America has stated that " within the next 10 or 15 years, the earth can have a new companion in the skies, a man-made satellite which will be man's first foothold in space." What credence can be put in such statements ? What is the ordinary person to think about the feasibility of space travel ? is it merely a topic for authors of science-fiction ? or is it a project so near the edge of reality that it is at the moment engaging secret energies of the great world powers ? We shall know the full answers to such questions only in the fulness of time. Many readers will be interested in the partial answers which can at present be given. Such answers are actually being used in America in an attempt to persuade the United States Government to set up a " space-station ", a man-made satellite of the earth, an island in the space just beyond our atmosphere.

## I

The chief author of endeavours to get military authorities in the United States to inaugurate work on a space station is Dr Werther Von Braun, perhaps the world's foremost rocket engineer, whose V-2 nearly brought success to Hitler. Taken to America from Germany in 1945, he is now technical director of the Guided Missiles Development Group in the Army Ordnance of the United States. He knows as well as anyone that there must be of necessity a great many steps between any form of manned space ship and a small missile shot into an orbit round the earth, or a hit on the moon with a charge of explosive. While admitting that space flight is not " just round the corner "—as too many of the credulous public believe—he is confident that flight outside the

atmosphere by human beings " is as sure as the rising of the sun." He is convinced that in little more than a decade at the outside a satellite space-station can be established in an orbit round the earth. He insists that such a station could dominate the world, and be either the greatest force for peace ever imagined, or a most terrible weapon of war. He is aware that Russia took over most of the rocket specialists from Peenemünde and is employing them, perhaps with an aim like his own. He foresees a race in the construction of an earth-satellite with the Soviet Union and the United States as the runners—if the United States can be persuaded to run. Most of his energies are being directed to make America enter the competition.

A popular version of the arguments he is using with that purpose will be found in *Across the Space Frontier*[1] which is an expansion of a symposium on space travel organised in 1951 by *Collier's* magazine. The outstanding contribution is by Dr Von Braun, but there is a foreword from the pen of the English Astronomer Royal, Sir Harold Spencer Jones ; and there are sections by Professor Kaplan and Professor Haber of the University of California and the astronomer, Fred L. Whipple of Harvard, all men of substance in the world of science.

Von Braun plumps for a space-station which would travel in an orbit about 1,000 miles above the earth and complete its trip round the globe every two hours. He takes the ' 2-hour ' orbit in preference to a faster one (closer to the earth), or a slower one (like that of the moon), because it is high enough up to escape air-resistance and near enough to the earth to constitute a first rate observation post. By means of telescopes and electronic accessories, every sea, country and city could be kept under view, and warlike preparations could be rapidly detected. Despite the great size of the territory surveyed, selected parts of the earth could be examined in minute detail, as we know from astronomical studies and photographs taken at high altitudes. The station could even serve as a carrier of atom bombs : rocket missiles with atomic war heads could be launched to strike targets at supersonic speeds, accurately guided to any spot on the earth by simultaneous radar tracking of both missile and target. Besides serving to guard world peace or as a weapon of war, besides its use as a geophysical and astronomical observatory, the station would be of service in other ways. It would be of immense benefit to meteorologists and enhance their powers of weather-study and weather-forecast. Navigators on sea or in the air would find it a ' fix ' that could always be recognised. Finally, the station would constitute a veritable spring-board into further space and be an indispensable step in travel to the moon or a voyage to a planet.

[1] *Across the Space Frontier.* Edited by Cornelius Ryan. Sidgwick and Jackson. London. 1952. Crown quarto, 160 pages. Illustrated. 21s.

To make the station in space a reality, use would be made of the rocket principle, which provides the ideal motive power in empty space[1]. Dr Von Braun believes that " on the basis of present engineering knowledge, only a determined effort and the money to back it up are required." He estimates the cost would be about twice that of developing the atomic bomb, but less than a quarter of what the United States spent on purchasing war materials in the second half of 1951.

The rocket would be powered by hydrazine (a liquid consisting of nitrogen and hydrogen, and closely resembling ammonia) oxidized with nitric acid. To reach the 2-hour orbit, the rocket would have to move five times as fast as the V-2. Such a fantastic speed (17,500 miles per hour) could be got by employing a 3-stage rocket. The 3-stage rocket would be a development of the WAC Corporal which reached a height of 250 miles above sea level on 24 February 1949. The WAC was fired from the nose of a V-2, starting its own rocket motor the instant the V-2 had attained its maximum velocity. It thereby added its own speed to that already acquired in the first stage. A doubling of the piggyback arrangement employed in the WAC would give a 3-stage rocket. The 3-stage rocket would thus have three sets of engines. When the first set had given their utmost, they would be jettisoned ; and so too the second set, in their turn. The third stage, or nose of the rocket, would continue on its way relieved of much dead weight. On reaching the 2-hour orbit, the rocket would be fixed in that orbit by a special set of manoeuvres.

A dozen rocket flights would be needed to construct Von Braun's proposed station in space, the pay-load of each rocket ship being equivalent to that of two super-constellations. A succession of flights, timed to the split-second, would arrive at the proper point and carry up the prefabricated parts of the artificial satellite. The station itself would consist of flexible nylon-and-plastic fabric in sections which would be assembled into a great ring. Inflation to the appropriate pressure would produce a breathable atmosphere and ensure the rigidity of the structure. The atmosphere would be renewed as the men exhausted it. A good deal is already known about the physical, chemical and physiological conditions of the synthetic environment which must be constructed to sustain human life in space, and Von Braun thinks we have enough knowledge to go on with.

In Von Braun's opinion, the conquest of space will not be the mere by-product of other work, but will require a well-planned programme over a decade of years, with each step dovetailed into the whole scheme of research and technical development. Success will not just come from the efforts which are at present being made on guided missiles and

[1] An account of the modern rocket will be found in *Rockets Jets and Space Flight, Studies*, September, 1950. Pp. 270–78.

supersonic aeroplanes. But once the decision has been taken to proceed to the building of a space station, once the funds have been voted for the project, the rest is a matter of time just as was the development of the atom bomb. No new fundamental knowledge is needed. Many factors will combine to make the station inevitable, not least the curiosity and challenge which in the past have sent men to the poles, across the oceans, into the air, and to the top of Everest. The military reasons for establishing the station are just now the most urgent, but in the long run they are the least significant. The promise of a new powerful way to explore the universe and help satisfy man's insatiable curiosity about his destiny will furnish an enduring urge, and who is to say it is not worth while.

## II

In examining Von Braun's proposal as put forward in *Across the Space Frontier,* it is fair to note that the book is at best an outline in which the authors seek to popularize the idea of space travel, and, therefore, naturally enough, they simplify the problems which are bound to arise. The technical difficulties are not stressed ; many are not even mentioned, let alone adequately discussed. On the other hand, if use could be made of achievements in rocket research which are on the secret list, Von Braun could have strengthened his case. None the less, it is the opinion of most men of science and technicians that Von Braun in his enthusiasm for space flight tends to oversimplify. When rocket engineers inspect his proposal at close range, they each see enormous difficulties in the departments they know best. Propulsion specialists, for instance, know how hard it is to get a single rocket motor to function in a reliable manner ; and to them it is nothing short of a nightmare to think of making a battery of 51 rocket motors fire properly and all at the same instant : they know that the failure of even a solitary unit could bring disaster. The WAC Corporal came back to earth with its steel fins fused, and recovery men hate to think what would happen to Von Braun's rocket crews as they returned to earth in red-hot aircraft. In addition to mechanical difficulties there would be navigational ones. Manoeuvres demanding the knowledge of a professor and the speed of an electronic computer would have to be carried out by human beings under extreme stress, of a kind not easy to describe or even imagine. The weightlessness to be expected in space and the absence of a sense of up-and-down might indeed prove more ludicrous than dangerous, but the crews of Von Braun's rocket would have to cope with accelerations nine times that of terrestrial gravity for sensible periods : it is known from experiences of test pilots that the human body with its delicate nervous system does not happily tolerate such great sudden changes. Other pessimistic commentators hail from schools such as

that for space medicine at San Antonio, Texas. They are aware that completely sealed flying suits with their own oxygen supply have been successfully employed in flights at high altitudes, and that there has been considerable study of the influence of protective mechanisms on human adaptability[1], but they point out that pressure suits do not permit their wearers to work freely in a vacuum for any length of time, and that it has not been found possible to give adequate protection to the throat and hands.

One of the toughest problems to be met with in constructing the space station will be to make it air-tight. Anyone with experience of finding and stopping leaks in vacuum apparatus shudders at the thought of building a 250 foot structure to hold air without serious leakage into space. This point is not examined or discussed by Von Braun and his collaborators. Another and a related set of problems will arise from the hazards which the rocket crew risk encountering once they quit the protective atmosphere of mother earth. Precautions would have to be taken to deal with the direct heat of the sun and the assault of ultra-violet rays. More difficult to cope with would be meteors and cosmic radiations. Cosmic rays, so far studied, turn out to be of several kinds. Many of those which penetrate to sea level retain enormous energy in spite of the vast air layer they have traversed, and are capable of leaving swathes of dead cells in their wake as they pass through living tissue. In space these mysterious particles may prove lethal, as there is no known effective shield against them.

Perhaps the greatest threat to men in space will be meteoric particles. A meteor hurtling through space at 25 miles a second or more would pierce an inch of armour plate. Meteors as small as grains of sand could riddle and burn the thin walls of a space station or space suit, and let the air escape. Should the pressurized cabin or suit be punctured, life would be extinguished in about 15 seconds. A statistical study carried out by Dr Whipple indicates that a structure as big as Von Braun's proposed station in space would be punctured by a meteor about twice a month on the average. To counter this, Dr Whipple proposes a 'meteor bumber' or an automatic self-plugging device similar in principle to the Air Force's self-sealing fuel tanks. His very suggestion makes one think that meteors may well be the greatest of all the terrors of space and the hardest to provide against effectively.

## III

Enough has been said to show the nature of the difficulties which will have to be met and overcome in order to make travel through space practicable. We are a long way from mastering the difficulties.

[1] Cp. the article by Professor Sir Bryan Matthews in *The Times Science Review, Winter 1952,* on life under extreme conditions.

We can be pretty certain solutions will be found, because there appears to be no need for new discoveries but only a great deal of patient work of a purely technical kind. It is likely that the obstacles will be surmounted gradually : a host of small perfections will flow out of each other. Progress will be hastened if world powers give priority to research on this specific subject, but they are unlikely to do so unless for urgent political reasons. Space flight is more likely to result from work going on at present in various parts of the world on jet planes and guided missiles. Travel outside our atmosphere would, then, take a relatively long time to achieve, a matter, say, of several decades instead of the dozen years optimistically claimed by Von Braun.

We agree with Von Braun that space travel can come only as the fruit—direct or indirect—of a great technical undertaking, much as was the case of the atomic bomb. The first part of our century saw man mastering aeronautics, the art of flight within the atmosphere. Developments are now such that it is no longer fantastic to believe that the second half of the twentieth century will bring success to space machines. In aeronautics there was orderly progress. There was no sudden, startlingly fresh, achievement. There was a gradual but rapid progress : one advance led to another. Many steps were taken, and taken quickly, from the Wright biplane in 1903 to the ' comet ' aircraft of the 1950's. We can be sure that progress in astronautics, or flight beyond the atmosphere, will also be gradual, if rapid : that many steps will have to be taken from the WAC Corporal to a landing on the moon or even a station in space. There will be much similarity between the evolution of astronautics and that of aeronautics. There will be also a significant difference ; and this brings us to the hard core of the answer to our present question.

The days are gone when an individual with private means could achieve new technical advances. Three men made the first aeroplane, but at least a nation's or an empire's resources will be needed to produce the first space ship. Modern technology is complex and expensive ; and requires enormous facilities in the way of laboratories, pilot (experimental) factories, testing grounds, big teams of specialists of all kinds, immense funds and credits. The large modern plane costs from one to ten millions sterling to perfect. The organizational work on the first atomic bomb involved an expenditure of £5,000,000,000. At the present time America spends one-fifth of that huge sum each year on developing applications of atomic energy. (Vast as these sums are, they are small compared with the cost of a modern war.) Finding solutions to the technical problems set by the challenge of space flight will involve expenditures of the same order, at least.

The spirit of inquiry, adventure and pioneering common to Columbus and Amundsen, to the conquerors of Everest, to men of science and

endeavour everywhere, is now engaged—we can be certain—on the problems of travel through space. Stimulus and pressure may not come from political groups but from the interplanetary societies which are a sign of the times in both hemispheres. Members of such societies are in agreement on the probable lines of astronautical development. They point out how encouraging are the achievements to date ; how rocket planes have carried men safely to altitudes of fifteen miles at twice the speed of sound ; how unmanned machines have climbed to 250 miles ; how monkeys and mice have returned unharmed from an ascent ten times higher than Everest. More conservative than Von Braun, they think that by 1965 there will be established an unmanned man-made satellite, kept aloft without continuous expenditure of power, radio-ing back to earth all sorts of research data, serving for civil and military purposes, and acting as a shortwave radio-relay station, or observatory for astronomy, meteorology, reconnaissance, bomb-aiming. By 1975 it will be possible to have larger piloted satellite rockets, fitted with wings to glide back to earth ; certainly before the year 1985, the other side of the moon will have been photographed.

Many people may say that some or all of such projects are undesirable. We have to remember, nevertheless, that it is out of character for man to forgo an adventure whether of body or of spirit once he has achieved the technical ability to make it practical.

## IV

There is a great deal of research on rockets and other space engines going on in America, Russia and the British Commonwealth, and it is no longer rash or presumptuous to infer that space flight may be a by-product of these and similar investigations. It is another question whether the efforts will lead to a new kind of armament race with the goal a station in space. Certainly, if Great Britain could hope by such means to " restore the balance of power ", and if she had the wealth—which she has not ; and that is an index to the magnitude of the venture—she would direct all her energies towards setting up a station in space at the earliest possible moment. The Soviet Union, like the United States and Great Britain, is known to have an extensive experimental study of jets and guided missiles in hand. Further, the Soviet States have industrial and other potentials comparable with those of America. The Russians have stated that they are investigating the possibility of constructing huge rockets able to leave the earth's atmosphere. M. K. Tikhonravov of the Red Army's Artillery Academy, has announced that " on the basis of developments in Soviet science, such rocket ships could be built : the creation of a space station is not only feasible but definitely probable." He added that Soviet developments in this field equal, if they do not surpass, those of the Western World. In considering

whether he is bluffing or boasting, we have to keep in mind that Russia achieved the atom bomb earlier than was expected, and that in 1945 she took over almost the entire staff of the rocket experimental station at Peenemünde.

A small man-made satellite could be constructed to shine and gleam in the high sunlight above the earth's atmosphere as brightly as a star of the first magnitude. We, the public, are not likely to be told weighty decisions of Russia or the United States. So, the first news of a space station may be a " star " rising and gliding swiftly across the sky. Will it rise in our time ? Almost certainly in our century. Will it rise in the East or in the West ? That that is a question with significance, many sensible men now believe.

P. J. McLaughlin

# Theocentric and Christocentric

*by* CUTHBERT LATTEY, S.J.

I AM using these terms here in a relative sense, as indeed they are generally used, and not in any exclusive sense. Whether in matters mainly of doctrine or mainly of the spiritual life, the chief emphasis may be either upon God as such, or on the God-man, the Second Person of the Blessed Trinity become flesh, Jesus Christ. There need not be any opposition between the two viewpoints taken in themselves ; neither need exclude some emphasis on the other, or deny it to be possible and legitimate. Nevertheless in the writings and mentalities even of the saints we may sometimes observe one or the other to predominate, and in some cases we may even consider the general presentation to be so one-sided as possibly to be somewhat misleading.

Following in the main a chronological order, it may be well to begin by taking some notice of the Old Testament, although here it is evident that there is hardly room for a strictly Christocentric presentation. But the anthropomorphic representation of the Godhead bears some analogy to the Christocentric presentation, for which it may be said to prepare in some sort the way. Thus in Abraham Heschel's book, *Die Prophetie* (Cracow, 1936), the distinction is drawn between " Anthropotropismus " and " Theotropismus " (pp. 113 ff), and is followed by a chapter on " Die pathetische Theologie," which again contains a section entitled " Der pathetische Gott." It will readily be understood that the author is dealing with Old Testament attributions of various emotions to God, such as repentance and anger. But this topic is not so closely related to the subject of the present paper as to call for detailed treatment here.

Coming therefore to the New Testament, we realize of course that the gospels may be said to be concerned almost wholly with the life and teaching of Christ, and in that sense to be entirely Christocentric. Nevertheless, St John's gospel lays so much stress upon the Saviour's Godhead that it may truly be called in a relative sense the Theocentric gospel. In its very first sentence it is said that the Word was God, and in x. 30 Our Lord declares, " I and the Father are one." St Thomas' confession, " My Lord and my God " (xx. 28) was doubtless originally the climax to the gospel ; it is generally agreed that the following chapter was added at a later date, for xx. 30–31 were obviously intended as a conclusion. The Catholic view, however, is that the addition was made by St John the Evangelist himself.

Yet the Christocentric side of his writings should not go without some notice. He knew himself to be the apostle whom Jesus loved, whom even Peter was fain to use as an intermediary with the Lord, and who

could fall back upon His breast to ask a secret question (John xiii. 23-25). He may well have been the beloved disciple of the Baptist also, after whom he may have been named, as indeed he may have been named in any case ; but he is all the more likely to have been so named if he were Our Lady's nephew, as would follow if (1) he were the son of Salome (Mark xv. 40), if (2) Salome were Zebedee's wife, and thus mother of the sons of Zebedee (Matt. 27. 56), and (3) if Salome were Our Lady's sister (John xix. 25), in which case St John the Evangelist may have followed his rule of not naming himself one degree further, not naming even his mother. But these possibilities are not sufficiently germane to the subject to be discussed in detail ; it is enough to have pointed out that, as has been said, St John the Evangelist may have been Our Lady's nephew, though this cannot be regarded as certain. If it could be so regarded, it would certainly enhance the Christocentric aspect of the fourth gospel.

One other detail should be added, itself also connected with the Baptist. It is St John himself who records in his gospel how the Baptist pointed out to him the Christ : " Behold the Lamb of God, who taketh away the sin of the world " (i. 29 : *cf.* i. 36). This would of course be understood in a sacrificial sense, and be connected with the daily morning and evening sacrifice of a lamb in the Temple, and more especially with the sacrifice of the passover. Such was the Evangelist's first impression of the Messiah, now come, and come to be sacrificed. It sank deep into his soul, and underlies the visions set forth in the Apocalypse of the Lamb that was slain (v. 6). Even so St Paul received as his first great lesson from the risen Christ that He was one with His Church and all her members : " I am Jesus, whom thou dost persecute " (Acts ix. 5 : *cf.* xxii. 8 : xxvi. 15) : it is not persecution of His followers whereof He speaks, but of Himself.

In an essay like the present, it is not possible to trace in any detail the influence of Christian thought upon the theory and practice of the Christian life, even in what directly concerns asceticism and prayer and mysticism. It is necessary to come at once to " Dionysius the Areopagite," or, as I prefer to call him simply, Pseudo-Denis. In my note upon Acts xvii. 34 in the *Westminster Version of the Sacred Scriptures*, I have explained that the name and title were made to cover not only the Dionysius (=Denis) there mentioned, whom Dionysius, bishop of Corinth (2nd half of 2nd cent.), states to have been the first bishop of Athens (Eusebius, Church Hist., III. 4. 10 : IV. 23. 3), but also the Dionysius sent from Rome into Gaul a little before the middle of the third century, who became bishop of Paris and was there martyred.

But the third Denis definitely claims to be St Paul's Athenian convert, " Dionysius the Areopagite," and endeavours to support his claim with a background of historical allusion. It may be as well to allude

at once to an excellent book devoted to him in the S.P.C.K. *Translations of Christian Literature*, and entitled *Dionysius the Areopagite on the Divine Names and the Mystical Theology*, by C. E. Rolt (1920). The author was a promising student who died prematurely at the age of thirty-seven ; he lost both his parents while yet very young, and from the age of fourteen was entrusted to the care of that well-known scholar, Dr Sparrow-Simpson, and would certainly have reached great distinction in his work, had his health allowed it. Indeed, as Dr Sparrow-Simpson rightly claims, he actually accomplished a fine piece of work in his Introduction to the two works translated by him, *The Divine Names* and *The Mystical Theology*. The two other important treatises, *The Celestial Hierarchy* and *The Ecclesiastical Hierarchy*, are not here translated. Dr. Sparrow-Simpson himself, besides the notice of Rolt in the preface, contributes a useful bibliography, and a still more valuable dissertation on " the influence of Dionysius in religious history." It is this dissertation with which the English student interested in the subject will find it wise to begin ; evidently the present essay cannot attempt such a scheme, but must be confined to one or two considerations which are vital to its main plan and find constant application, even where attention is not explicitly called to them.

" It is an interesting speculation for the theological student," writes the editor at the end of his dissertation, " what the position of these writings would have been, if their author had never been identified with the disciple of St Paul." One is indeed inclined to dub him the *fons et origo mali*, so strong has his influence been in the direction of an extravagantly theocentric attitude. About Pseudo-Denis himself we know next to nothing ; but the Dionysian writings belong to the end of the fifth century, and are strongly neo-Platonic. They were widely read in the eastern church, and had considerable influence in the West. " The Mystical Divinity," in the words of an old chronicler, " ran across England like deer."

The basis of the teaching of the *Divine Names* and the *Mystical Theology* is the doctrine of the Super-Essential Godhead, which means that God in His ultimate Nature is Supra-Personal. Personality is a finite thing : the person is not the whole universe, but only a member thereof. But God is supra-personal, because He is infinite ; the consciousness we can ascribe to Him is a Universal Consciousness. We see the ultimate level beyond us, the Super-Essential Godhead which is the Absolute, the Ultimate Unity containing in an undifferentiated condition all the riches of consciousness, life and existence dispersed in broken fragments throughout the world. This undifferentiated Godhead cannot be called conscious, because consciousness implies a distinction between the thinking subject and the object of thought, even if the latter be considered as awareness of self. Similarly life, existence, unity imply distinctions.

Ultimately the Godhead is undifferentiated and unrelated, but it is manifested under the form of differentiation and relationship.

Some such inadequate summary of Pseudo-Denis's conception of the Godhead appears to be necessary in order to any understanding of the distinction between Theocentric and Christocentric spirituality, an understanding which may be carried a further stage by a careful perusal of the whole volume which I have made my foundation. What is it that follows for the spiritual life and prayer? God, changeless and immaterial, must be sought through riddance of the changeful and material: the human spirit must go out of itself and be merged in the Super-essence, the Uncreated Object of its ecstatic contemplation, of the supreme unknowing. From a purely Theocentric view all this may be effectively worked up and sound beautiful; but upon reflexion the convinced Christian must surely put his question: what about the Incarnation?

Dom Cuthbert Butler, in his valuable work *Western Mysticism*[1]—though indeed the title is misleading, seeing that he confines himself to SS Augustine, Gregory and Bernard—has made it clear at the end of the book how much St Augustine made of the neo-Platonists, "great and almost divine men." This admiration has indeed influenced a famous passage in his *Confessions* (Book 9, chap. 10), which can only be quoted briefly here, the thought of himself and of his dying mother:

"So we said: If to any man the tumult of the flesh grew silent, silent the images of earth and sea and air: and if the heavens grew silent, and the very soul grew silent . . . and in their silence He alone spoke to us . . . just as we two had but now reached forth and in a flash of the mind attained to touch the eternal Wisdom which abides over all: and if this could continue, and all other visions so different be quite taken away, and this one should so ravish and absorb and wrap the beholder in inward joys that his life should eternally be such as that one moment of understanding for which we had been sighing—would not this be: *Enter thou into the joy of thy Lord?*"[2]

This is none the less true and beautiful because it shows a neo-Platonic and Theocentric basis: yet how different from the simple and highly Christocentric thought we find so often in St Paul: "'Tis no longer I that live, 'tis Christ liveth in me" (Gal. ii. 20): "For me to live is Christ and to die is gain. But if to live in the flesh meaneth for me fruitful labour—then, which I am to choose I cannot tell. I am caught between the two, my longing to set forth and to be with Christ—for that were far better—yet for your sakes to remain in the flesh is more needful" (Philip, i. 21–24).

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[1] Constable, 1922.

[2] From Mr F. J. Sheed's translation: Sheed and Ward, 1943.

None the less Pseudo-Denis had a fairly triumphal progress down the ages, helped in England by the great popularity of *The Cloud of Unknowing*, which is explicitly based on his teaching : " Whoso will look in Denis' books," runs the text, " he shall find that his words will clearly confirm all that I have said or shall say, from the beginning of this treatise to the end " (chap. 70).[1] Just before these words comes a quotation from Pseudo-Denis which shows incidentally how Theocentric is the *Cloud* itself : " The most godly knowing of God is that which is known by unknowing."[2] In Chap. V the Cloud would banish all thought of " the kindness or worthiness of God," of Our Lady, of the angels and saints, because " it is far better to think upon the naked being of Him (God) and to love Him and praise Him for Himself " : so that, as Father Baker writes in his commentary on the chapter, " our author utterly excludeth images out of his work," though " he must and doth allow the use of images till God calls the man to aspirations." Thus the thought even of the Incarnation is but a ladder to be kicked away when it has been climbed.

Is Christianity to be reduced to this, and to be reduced to this as its best ? It must be realized how much of it must be discarded as a part of supposed progress : this is Theocentric Christianity pushed to extremes. Dr David Knowles devotes a careful treatment to Father Baker in his *English Mystics*[3], to which the reader may be referred : one sentence may suffice here : " Father Baker was a convert to Catholicism from Elizabethan Protestantism, and it may be permissible to suggest that the mental climate in which his early life had been spent was unfavourable to the growth of the full devotional and liturgical life."

Of St Benedict himself Abbot Butler writes emphatically in his *Ways of Christian Life*[4] :

" St Benedict's own spirituality and piety may more rightly be called ' Christocentric,' for Jesus Christ is above all the central religious idea and motive of the Rule . . . The Rule begins with Christ, ever dwells on Christ, and ends with Him. The aspirant to the monastic life is welcomed at the outset as one going to serve as a soldier of Christ ; the monk is by faith to see Christ in all, in the Abbot, in the guests, in the sick, in the poor (Matthew, xxv) . . . by love of Him will he come to perfect charity . . . he is to prefer nothing whatever to Christ." In this connection it is unnecessary to do more than mention Abbot Marmion's immensely successful work, *Christ the Life of the Soul.* (Sands, 1922).

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[1] *Cloud*, chap. 70. I use the excellent edition of the *Cloud* and other treatises (with the commentary on the *Cloud* by Father Augustine Baker, O.S.B.), edited by Abbot Justin McCann, O.S.B. (3rd edition, 1941).

[2] *De divinis nominibus*, chap. 7, No. 3.

[3] Burns Oates, 1927 : p. 174.

[4] Sheed and Ward, 1932 : pp. 9–10.

But it is St Bernard and St Francis that may be said to have put the matter beyond serious dispute as a major issue : their work can never be undone. " All later generations of the Faithful owe in the first place to the Benedictine tradition, in the person of St Bernard, that strong Christocentric character of worship of the Sacred Humanity of Our Lord and loving contemplation of the mysteries of His life, that is the heart and soul of Catholic religion and piety ; also the fervent childlike devotion to His holy mother, Our Lady ; and the wide-spread devotion to Angel Guardians and to St Joseph : among the most distinctive elements of our modern Catholic religious life."[1]

St Francis and his followers brought new fervour into the religious life of the mass of the people. He urged Holy Communion and reverence for the Blessed Sacrament, he introduced our modern realistic (not merely quasi-liturgical) Christmas crib. The Franciscans preached in street and market-place, praying in the vernacular and using vernacular hymns, and they introduced the Stations of the Cross ; they were thus to a large extent the founders of popular devotions.

About the time of the outburst of Protestantism, Spain produced a galaxy of saints, among whom were St Ignatius of Loyola (d. 1556), St Francis Xavier (d. 1552), St Peter of Alcantara (d. 1562), Blessed John of Avila (d. 1569), St Francis Borgia (d. 1572), St Teresa (d. 1582), and St John of the Cross (d. 1591). There is a certain unity among them, both of acquaintance and spirit. St Teresa and St John of the Cross hold a place second to none among the writers on mystical theology. St Teresa (b. 1515), was considerably older than St John (b. 1542), who consented about 1567 to join her Discalced Reform and the projected first foundation for friars. Both depict in the main their own experiences, and it must not be supposed that even the saints must follow exactly the same way. St John writes more theoretically, whereas St Teresa has a wonderful gift of describing tellingly her own experiences. St John's use of Scripture is mostly accommodated. " In one sense, St John of the Cross took up his pen in order to supplement the writings of St Teresa ; on several subjects, for example, he abstained from writing at length because she had already treated of them. Much of the work of the two saints, however, of necessity covers the same ground."[2]

St John writes strongly against the use of the imagination, insisting that no created or imagined thing can serve the understanding as a means of union with God.[3] But it should be noticed that in his Prologue to the *Ascent* he explains that in this work he is not addressing all persons in general, but chiefly some friars and nuns of the primitive observance, " who by the grace of God are on the pathway of this mount." Even

[1] *Ways of Christian Life*, pp. 24–25.
[2] *The Complete Works of St. John of the Cross*, translated and edited by the late Prof. E. Allison Peers : 3 vols. : 1934–5 : vol. 1, p. xlix.
[3] *The Ascent of Mount Carmel*. Bk. II, chap. 8.

so, there seems to be a real difference of teaching between himself and St Teresa, which she quite deliberately indicates. An instructive example of what has happened may be found in the *Ascent*, Bk. III, chap. 2, par. 14, where it said of "the spiritual man" that "all the things that he hears, smells, tastes or touches, he must be careful not to store up or collect in his memory, but he must allow himself to forget them immediately . . . so that there remains no knowledge or image of them whatsoever in his memory . . . he must freely allow everything to fall into oblivion . . . everything that is natural, if one attempt to make use of it in supernatural matters, is a hindrance rather than a help."[1]

There can be no serious doubt that we have here St John's genuine text, as translated by Allison Peers from the critical edition of the Spanish text edited by Father Silverio de Santa Teresa, C.D. (=Discalced Carmelite). But these words are omitted in the *editio princeps*, and instead we read that "to forget and set aside knowledge and images is never applicable to Christ and His Humanity," and so on. Allison Peers himself was led to make his own reliable translation by such "timorous qualifications," as he writes, "of statements which have seemed to the interpolator over-bold."[2] Not indeed that there was no justification of this "timorous" attitude; on the contrary, as he shows in his preface, the danger from the Spanish Inquisition was a serious one, and the attack upon St John "would probably have succeeded but for the warm, vigorous and learned defence put up by the Augustinian Fray Basilio Ponce de Leon, a theological professor in the University of Salamanca."[3]

About St Teresa's attitude there can be even less doubt. She writes humbly, because aware that there were "learned and spiritual men" against her. "They say that anything else, even Christ's Humanity, will hinder or impede those who have arrived so far from attaining to the most perfect contemplation. . . . I cannot bear the idea that we must withdraw ourselves entirely from Christ and treat that Divine Body of His as though it were on a level with our miseries and with all created things." After having actually tried this withdrawal, her final opinion was: "I believe I was committing an act of high treason, though I committed it in ignorance."[4]

This is an extract from her *Life* of herself, of which Allison Peers considers that the greater part of the second and final version was written towards the end of 1565.[5] (St Teresa was born in 1515, and died in 1582). In 1577 in her *Interior Castle* (Sixth Mansions, chap. 7, Nos. 6 ff.), she insists more strongly and fully on the point. She admits that souls

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[1] *Complete Works*, as above: p. 233.
[2] *ibid.*, Preface, p. xviii.
[3] *ibid.*, p. lxv.
[4] *Life*, chap. 22, *ad init.*
[5] My dates are taken from Allison Peers' *Outline of the Life of St Teresa* at the beginning of vol. I of his edition of her *Complete Works* (Sheed and Ward, 1946).

led by God to perfect contemplation are not able as a rule to practise the ordinary kind of meditation, implying a considerable use of the understanding, so as to dwell in detail upon mysteries of Christ's life. Nevertheless, St Teresa maintains, such souls are mistaken in thinking that they cannot frequently think upon such mysteries, especially when the Church is celebrating them. They can comprehend the mysteries in a more perfect way, looking upon Christ in His passion, for example, with a simple gaze, so that the will is moved to long to suffer something in return. Meditation of this kind should certainly be practised, and it should be noted that St Teresa declares that it will not impede the most sublime prayer.[1]

Above I have mentioned the galaxy of saints produced by Spain in the sixteenth century. Of these three (St Ignatius, St Francis Xavier, and St Francis Borgia) belonged to the Society of Jesus, and of these St Ignatius was obviously the spiritual master of the other two. Indeed, before speaking of his principles, chiefly as embodied in his Spiritual Exercises, it may be well to note the tremendous effect of the practical influence of his immediate guidance, which seems to be without parallel in the records of sanctity. His first permanent disciple, Blessed Peter Faber, was the first priest of the Society, and his work was typical of St Ignatius' earliest ideal of the Society, the *missio* or special "job," undertaken as expediency and obedience required; it was becoming also that he should close his life as a martyr of obedience, coming to Rome at once at St Ignatius' summons when the heat was at its worst, only to die there.

Of St Francis Xavier there is little need to write, since he has long been recognized as one of the great characters of history, and besides, the full and competent life of him by Father James Brodrick[2] lays the full story before all who wish to learn of it. Above all, we come to realize how much he loved his fellowmen, especially St Ignatius and his comrades in the Society, and the heathen to whom he was devoting his life. St Francis Borgia became the third general of the Society, and thus had much influence on its developments, not least in Spain, where Blessed Peter Faber doubtless also had some influence in drawing St Alphonsus Rodriguez, that holy laybrother, into the Society. And St Alphonsus did much to enlighten St Peter Claver about his mission to the slaves, and to fire his zeal for that work. Finally, St Ignatius formed and guided St Peter Canisius in his work as apostle of Germany, and St Peter, together with Blessed Peter Faber, helped St Stanislaus to overcome the difficulties of his vocation.

[1] I have no wish to discuss the matter at length, but I think that Abbot Chapman meant much the same as this when he wrote: "I suppose you are aware that even the greatest contemplatives *must meditate*." (The Letters of Dom John Chapman, O.S.B., ed. Dom Roger Hudleston, O.S.B. (Sheed and Ward, 1935).

[2] Burns Oates, 1952.

So much briefly upon the burst of sanctity which cradled the Society of Jesus. For the principles which vitalized it we must certainly turn to St Ignatius' Spiritual Exercises. He may be said to begin and end with the Theocentric, with the Christocentric as the connecting link. To begin, because he would have us humble ourselves at the outset at our failure to observe even the most elementary rules of conduct, known even by reason, and enjoined by God by the very nature of His being, even as He Himself is known to man even by the mere light of reason. And with God Himself the Spiritual Exercises likewise necessarily end : all that God has done for us, including the Incarnation and the life and death of God the Son, only bring us back with fuller knowledge and love to what God is in Himself, the infinite summary of all that is good and true, deserving our utter devotion to Him and consecration.

In the same spirit St Ignatius took as his watchword the greater glory of God, but insisted that his order should be called the Society of Jesus. This preserved the strong Theocentric emphasis that has always existed in the Church, but strengthened the Christocentric movement, which has been gaining ground ever since. This is evident chiefly in the increased devotion to the Holy Eucharist, and in the development of the devotion to the Sacred Heart, the latter closely linked up with the former. The reconciliation between the Theocentric and the Christocentric attitude—if indeed it be right to speak of a reconciliation at all, as though there were need of something of the kind—such a reconciliation, let us say, for such as are not at ease on the point, is a firm belief that Christ Himself is God. From the Israelites, St Paul says, in declaring their privileges, " is Christ according to the flesh, who is God over all, blessed for ever." (Rom. ix. 5). And St John enounces the same truth in more Theocentric terms, in words that went far to establish the same doctrine in the disputes of the first Christian centuries : " The Word was God . . . the Word became flesh " (John, i. 1, 14).

CUTHBERT LATTEY

# William Higgins, Chemist (1763-1825)

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A GREAT deal has been written about William Higgins and the claims[1] he so vehemently preferred in 1814 and subsequent years to be, rather than Dalton, the originator of the atomic theory in the form current in the early 19th century. But in spite of much discussion little has appeared in the nature of biographical detail ; what has been published is based mainly on an uncritical reliance on Sullivan's life printed in 1849,[2] of William Higgins, and of William's uncle, Bryan Higgins, M.D. Sullivan's work, particularly in regard to Bryan Higgins, was based on information supplied by Captain and Mrs Nassau William Stephens[3] of Dublin. Mrs Stephens, née Blake, was a grand-daughter of Bryan Higgins,[4] but her memory of the past was not perfect, and Sullivan, himself, makes the inexplicable error of referring to her as Bryan Higgins's " niece."[5]

It is felt, accordingly, that there is a need for an account of the life of William Higgins based as far as is possible on primary sources, and this article is an attempt to meet this need. Owing to the destruction by fire of the Irish Public Record Office in 1922, some source matter is no longer available ; an effort has been made, however, to examine such relevant material as remains. For continuity of narrative detailed discussion of this material has been relegated to foot-notes and to the Appendix.

## 1. Family and Early Life

Dr E. MacLysaght's map of mediaeval Ireland[6] which gives the location of the principal Gaelic clans shows that the O'Higgins group lived in the south of county Sligo, near the Mayo border. O'Rorke[7] states that Sligo county is indebted to the O'Higgins or Higgins family for many men of note. They possessed much land[8], before as Catholics they lost it, but they owed their celebrity to their poetic performances for which they were famous from the 14th century.[9] When in the 17th century the bardic profession decayed with the decline of Gaelic Ireland, the bardic families with no tradition of soldiering, farming or commerce, turned to medicine. Possibly it was in this way that a medical tradition developed in the Higgins family.[10] In addition to his uncle Bryan, William's grandfather, also a Bryan, and probably his father Thomas, were doctors.

The elder Bryan who died in 1777 was a distinguished man.[11] His grandson William was born at, it is believed, Collooney, Co. Sligo[12] in

1762-63.[13] We know nothing of his school-days ;[14] Sullivan says merely that while still a boy William was taken to his wealthy uncle Bryan who had married an heiress and set up a laboratory in Greek street, Soho, London.[15]

## 2. London and Oxford

The date of William's transfer to London is not definitely known. His uncle Bryan in a letter dated 12 January 1802[16] referring to an experiment showing the production of sound by a flame of hydrogen burning in a tube, writes, that he first exhibited the experiment in 1777, and that it was afterwards shown "by my cousin (*sic*),[5] Mr Higgins, who now teaches in Dublin ; who exhibited it at Sir Joseph Bank's,[17] and, if I am not misinformed, at Oxford, where he served the professor as operator." Bryan also states that the experiment was shown at Mr Kirwan's in 1784. Banks's house was a meeting-place for scientists from about 1777 ; Kirwan[18] lived in London for ten years from 1777.

Again in the Preface to his *Experiments and Observations relating to Acetous Acid, etc.*, 1786, Bryan Higgins indicates that more than one-third of the book was printed in 1784, so that the experiments must have been carried out before that year. He makes no specific mention of William, but the latter[19] in a reference to this work states " I studied with the Doctor at this time, and assisted in making all the experiments contained in that work." Bryan (*loc. cit.*, p. 283) writes that " some part of every one of these experiments and mensurations was committed to the care and fidelity of my operator." In view of the number of experiments described in the volume which contains some 300 pages of experimental matter, and, having regard to the necessity for William being trained before he could be of much use to his uncle, it is probable that he came to London some years before 1784. Apart from practice, he knew enough chemistry in that year to abandon the phlogiston theory.[20]

Sullivan[2] states that after a year or two in London, William went to Pembroke College, Oxford, where he graduated. This information can be amplified from Higgins' works. In his *Comparative View*[21] William refers to the observations on the reduction of nitric acid he made in Dr. Higgins's laboratory in the latter end of March 1785, and to a subsequent visit to Sir Joseph Banks's house.[17] He also states that he knew Dr Brocklesby.[22] In his *Essay on the Theory and Practice of Bleaching* (p. 14)[23] Higgins mentions a mineralogical excursion he made through England in the summer and autumn of 1785, when he also visited factories. In the *Comparative View* (p. 312), he indicates that work on ammonia he was carrying out with Dr Caulet[24] was interrupted because he was obliged to set out for Oxford some time after December 1785. In the spring of 1786 he was in contact with Dr Austin,[25] who was probably in Oxford at the time. We know from Foster's *Alumni Oxonienses*[13] that William

matriculated at Magdalen Hall[26] on 6 February 1786. The way in which the dates fit confirms the view that the William Higgins in Foster is the one with whom we are concerned.[27]

Higgins seems to have remained for about one year at Magdalen Hall, and then to have migrated to Pembroke College;[28] his name first appears on the Buttery Book of Pembroke on 16 March 1787.[29] He may have been attracted by the reputation of the Master, William Adams,[30] who was said to have a deep knowledge of chemistry.[31] Well-known contemporaries of Higgins include Davies Gilbert,[32] who succeeded Humphry Davy as President of the Royal Society, and James Smithson,[33] who left upwards of £100,000 to found the Smithsonian Institution at Washington. In addition to Dr Austin, Higgins refers to Dr Wall[31] and particularly[34] to his learned friend, Dr Haworth[35] of St Bartholomew's Hospital, " one of the Radcliff (*sic*) travelling fellows from Oxford, with whom I had the pleasure of being intimately acquainted at the university." Haworth apparently shared Higgins' amusement at the failure of the reviewers of the *Comparative View* to understand the atomic theory propounded in it.

Higgins spent more than a year at Pembroke, for the College Buttery Books show that he was in residence up to the middle of 1788.[36] There are references to Oxford in his writings,[37] but nowhere does he give a reason for leaving without a degree. We have seen[38] that while at the University he was an " operator" (lecture assistant) to the professor, but it is not certain with whom he " operated." When Higgins matriculated in February, 1786, Austin[25] was Professor of Chemistry, but resigned in August when he was appointed physician to St Bartholomew's Hospital, London, in succession to Dr J. G. Caulet, who as indicated above, was a friend of Higgins.[24] In the *Comparative View* (p. 312) Higgins mentions that he often had the opportunity of speaking to Austin in the spring of 1786, but if he did serve Austin as operator his tenure of office must have been short.

Thomas Beddoes[39] was appointed to succeed Austin early in 1788,[40] but was not regarded as occupying a chair ; he is referred to as " Reader" or " Lecturer " ; Bryan Higgins may have been writing loosely when he used the term " professor." As Higgins probably left Oxford in the following August, his period of association with Beddoes would appear to have been brief. William refers in the *Comparative Review* (p. 313) written in 1788, to a discussion with Beddoes " our present lecturer in chemistry at Oxford " on the reduction of nitric acid to ammonia about July 1787. It is not clear why Beddoes was then at Oxford (cf. footnote 44). Meldrum[41] assumes that it was Beddoes whom Higgins served, but, as indicated above, it could have been Austin[42] or both. Higgins does not

seem to have remained on cordial terms with Beddoes for in his *Experiments and Observations on the Atomic Theory*, he prints (p. 7) an extract from a very formal letter from Beddoes in Oxford, dated 10 April 1789 expressing the hope that the *Comparative View* would support the phlogistonists and stating that Priestley had re-established the existence of phlogiston. The standard life of Beddoes by Stock does not mention Higgins.[39]

While at Oxford, William sent to the Royal Society a paper on the analysis of the human calculus.[43] The Ms. of this paper by " William Higgins of Pembroke College, Oxford," dated " Oxford, 2 April 1787 " is in the archives of the Royal Society,[44] and there is an account of its being read to the Society on 3 April 1788.[45] The Society did not print the paper so Higgins included it as an Appendix to the *Comparative View*. It was probably at Oxford that Higgins carried out the numerous experiments on which the *Comparative View* was based.[46] He says that he discarded the phlogiston theory about 1784,[20] which was before he went up to Oxford. The laboratory in which he worked was in the basement of the Ashmolean Museum in Broad St.[47] He describes the chemical " elaboratory " some 6 ft. below ground (*Comparative View*, p. 176). A mixed crop of sodium and calcium nitrates grew on the walls every three or four months[48] and he analysed this " nitre " mixture for his friend Dr Wall.[31] Sullivan[2] says that after Higgins left Oxford he continued to work in London with his uncle Bryan for some time. Later, according to Sullivan, a coolness arose between them because of William's anti-phlogistic activities ; Bryan was, as William states, a " phlogistian."[49] Apparently Bryan cut off supplies, and William was then in what Sullivan calls " rather adverse circumstances " for some time. On the other hand William says[50] that the *Comparative View* which passed through two editions, in all about 1000 copies, in the course of two years was printed and published at his own expense. As the price of the book was at least 6s.,[51] Higgins for an edition of say 500 copies had presumably to find over £100 for expenses, even if the price allowed a profit. One wonders if Higgins was as " reduced " as Sullivan suggests. The book, published in 1789 when Higgins was 26, represents his greatest achievement. On it is based his claim to be the originator of the atomic theory as applied to chemical phenomena.

We know little of what Higgins did in London until he left for Ireland in 1792. There is in the British Museum Library[52] the minutes of a meeting, held at Whitehall on 10 May 1790 of " the Right Honorable the Lords of the Committee of Council, appointed for the Consideration of all Matters relating to Trade and Foreign Plantations." The Committee considered " a Memorial of Ambrose Godfrey, Chymist,[53] and William Higgins of Pembroke College, Oxford,[54] praying a Reward for a newly discovered method of printing Linens etc. with a printed paper

therein referred to." The memorial was sent to the " Society for the Encouragement of Arts, Manufactures etc." for an opinion on the merit and utility of the discovery.

### 3. Chemist to the Apothecaries' Hall of Ireland (1792–1795)

The year of the publication of the second edition of the *Comparative View* (1791) saw developments in Dublin which were to bring William back to Ireland. On 5 May 1791 the Royal Assent was given to an Act of the Irish Parliament (31 George III, chapter 34) which came into operation on 24 June 1791, " for the more effectually preserving the Health of His Majesty's Subjects, for erecting an Apothecary's Hall in the City of *Dublin*, and regulating the Profession of an Apothecary throughout the Kingdom of *Ireland*."[55] The Act gave additional powers to the Corporation of Apothecaries chartered in 1745. Provision was made for a general council or court of members or subscribers who acted through a court of directors. The promoters of the Act met in February 1791, and later, as Directors, set about providing a " Hall " which was to contain a shop for vending drugs and a laboratory for compounding chemicals. The appointment of staff then fell for consideration, and in August 1791 the Directors decided to advertise in Dublin and London papers for a chemist. In September they toyed with the idea of a combined post of chemist and apothecary, but eventually resolved " that it must materially tend to serve this institution to have the two Offices of Chemist, and Apothecary separate."[56]

William now appears in the picture. The minutes of a general meeting of Members held on 1 November 1791 record the receipt of " two letters from Mr Wm. Higgins in London . . . offering himself to this Corporation as Chemist on certain terms," and in December the Secretary sent a letter of appointment to Higgins. The text of the letter as entered in the Minute Book of the Hall is as follows :—

No. 10 Grafton Street Dublin 26th Decr. 1791.

Sir

I am ordered by the Court of Directors of the Apothy's Hall of Dublin to inform you that they are in daily expectation of a proper Concern for an Hall. As soon as they have got such Concern, you shall have Notice thereof, and will then be engaged as Chemist at Two Hundred pounds per Ann. with apartments, Coals and Candles.[57]

It is expected that you will conduct the Chemical and Galenical Preparations ; and in all possible Matters, promote the Establishment and Prosperity of this Infant Undertaking. From your Character and Experience they have no Doubt but you will fulfil the expectations which

they entertain of you— nor would they offer such high Emoluments to any Person, whose Knowledge and Opportunities did not entitle him to their entire Confidence.

I have, etc.

D. Moore Secretary.

Mr Wm. Higgins, No. 37 East Street Red Lion Square, London.[58]

On 6 January 1792 Higgins replied accepting the post.[59] After some preliminary difficulties owing to a defect in the title of the first site they selected, the Directors obtained a property in Mary Street, Dublin, and in March 1792 the Secretary wrote to Higgins requiring him to come over directly. On 13 April 1792 he was sworn into office and a month later (18 May 1792) the Treasurer was ordered to " provide furniture for the small back room on the first floor for the use of our Chemist." The scientist is ever the denizen of the small back room.[60]

During 1793 and 1794 there are occasional references to Higgins in the Minutes of the Hall ; he was engaged in fitting up the laboratory. As the establishment developed it became necessary to consider in detail the conditions of service of members of the Staff, and on 26 April 1794 the Directors defined their duties.[61] The officials were to have ample time to carry out their assignments, since on 29 April 1794 it was provided that " every Officer and Servant employed in this Institution is to attend in his respective Station every Morning in Summer at Seven O'Clock and in Winter at Eight and to continue therein until at least Eight OClock in the Evening (Sundays Excepted) Note by Summer is meant from the 25th March to 25th September." Judged by modern standards the hours of work were appalling, but they could not have been rigorously enforced since, as will be described later, Higgins found time to act as in a part-time capacity for the Irish Linen Board, and to attend meetings of the Royal Irish Academy. His work in the Hall was supervised by a Committee of three directors who, for example, kept an eye on his expenditure on glass-ware (" Glass house Bills ". See Minutes of June 3, 20 and 24, 1794).

Higgins's first recorded chemical task seems to have been to analyse water from a hot spring in the Leixlip district some eight miles west of Dublin. The sample was submitted by the well known politician the Right Hon'ble Thomas Conolly.[62] In view of Conolly's position the Directors fell over themselves to oblige and on 20 June 1794 Higgins was ordered to analyse the sample quickly and accurately and report to his Committee. His report was, however, not available until 8 August. The analysis was at once forwarded to Conolly together with the fee of ten guineas which he had sent, but which was returned.[63] On 16 September 1794, Higgins " having complained to several Members of this Court of the great interruption in his business by the admission of

every person to the Laboratory," it was resolved " That no Person be admitted into the Laboratory after Monday the twenty second instant unless introduced by a Subscriber."[64]

By December 1794 the premises for the Hall were ready, Higgins was given a better room, and all Members of the Company were invited to dinner at the Hall on Tuesday 23 December. But in spite of the rejoicing 1795 was not to be an easy year for Higgins. On 6 January the Directors criticised the quality of " the red precipitate and Calcined Mercury " and the yield he had obtained of a preparation of Rochelle Salt. The Directors also referred to the number of accidental losses of material which occurred in the laboratory. Nor was that all. The Directors, who appear to have been amateurs in the matter of finance, must have seen the red light for on 21 November 1794 they decided " to open a set of Books and draw up the General State of the affairs of this Corporation." The results were frightening and on 13 January 1795 it was found necessary to summon immediately a general meeting to consider the state of the funds and the expediency of application to Parliament.

The General Council held ten days later set up Committees : to approach the Lord Lieutenant [65] to ask for Government contracts ; to request Henry Grattan[66] and other influential gentlemen for assistance in amending the Act so that the Hall might receive more money ; to examine the possibility of obtaining £2000 as soon as possible ; and to inquire into the services rendered by the officers and the cost of these officers to the Institution. The Committees were to report before the following May. On 27 May the Committee appointed to investigate the establishment reported *inter alia* that the cost of the laboratory greatly exceeded the value of the entire produce, and that the demand for chemicals did not warrant the continuation of so large an outlay. Whereupon the Governor was " requested to inform Mr Wm. Higgins that this Corporation has no further occasion for his services." At first Higgins seems to have taken the abrupt retrenchment of his post graciously, for on 2 June the Directors resolved :—" That the grateful and unanimous Thanks of this Court be returned to Mr William Higgins for the Masterly manner of fitting up our Laboratory—his Zeal for the good of the Institution on all occasions and for his Friendly offer of giving his advise (*sic*) and assistance gratuitously when called on."

This rare feeling between employer and discharged employee did not last. The Corporation owed Higgins one year's salary due on 20 June 1795 which was not paid, so that on Tuesday 30 June we find in the Minutes :—" Mr William Higgins having importuned this Court collectively and individually for his salary due the 20th inst. and as neither

the Governor or Treasurer find it convenient at present to accommodate this Company with £200 wanting for that purpose

Resolved That for the Honour of this Company Two Hundred pounds be borrowed to pay Mr Higgins . . ." Although Higgins can hardly be blamed for importuning the Directors for his arrears of pay, as happened all too frequently his language was such as to rankle, for on the following Friday (3 July) we find :—" Mr Higgins our late chemist having behaived (*sic*) to this Court in a very unbecoming manner

Ordered

That the Secretary write him as follows, viz.

Mr Higgins

The Court of Directors expect you will move your Lodgings immediately from this House in consequence of your very unhandsome Language to different Subscribers and to this Court last Tuesday." On 17 July the Directors adjourned consideration of a demand by Higgins for lodgings up to next quarter day, and on 1 August, his claim was further adjourned as he was out of Ireland. Higgins does not seem to have pressed this claim further. Time heals quarrels. On 31 January 1802 Higgins was admitted an Honorary Member of the Hall in company with Cavendish, Kirwan and some others " who had distinguished themselves in Chemistry or Natural Philosophy."

The story of Higgins's departure from the Apothecaries' Hall, as told in the Minutes quoted, is given in detail as some of his biographers[67] have incorrectly surmised the reasons for his transfer to the Dublin Society[68] (see below) at half the salary.

*To be continued.*

T. S. Wheeler

## Notes

[1] These claims are discussed by the author in *Endeavour*, January 1952.

[2] W. R. Sullivan, *Dublin Quarterly Journal of Medical Science*, 1849, *8*, 465–495. An account of this Irish chemist (1823?-1890) is given in *Studies*, 1945, *34*, 21, 36. Sullivan was about 26 when he wrote on Bryan and William Higgins ; too young, perhaps, to verify all his references.

[3] See Appendix, particularly note 14.

[4] This is clear from the wills of :—(i) Bryan Higgins (in Somerset House, London) ; (ii) his daughters, Mrs Anne Blake and Mrs Charlotte Golding (abstracts in Public Record Office (P.R.O.), Dublin) ; (iii) Mrs Anne Blake's daughter, Elinor Stephens, née Blake, whose will is one of those of which a complete copy is available in the P.R.O., Dublin. Most of the records were destroyed by fire in 1922.

[5] Sullivan states that Bryan Higgins died in 1820, but his will was proved in January, 1819. There is a discrepancy between the year of Bryan's birth indicated by Sullivan (1736–37) and that listed in the record of students at Leyden University (*c.* 1741). This record is said to be unreliable in regard to the age of students. (R. W. Innes Smith, *English-speaking Students of Medicine at the University of Leyden*, 1932). The entry reads " Higgins (Higgius) Bryan, Hibernus, Oct. 5, 1765, *aet.* 24, Med." Again the property in London owned by Bryan Higgins was in Lincoln's Inn (his will) and not in King's Inns (Sullivan). There is a King's Inns in Dublin, but not in London. William nowhere says that Bryan was his uncle and Bryan (*Nicholson's Journal*, 1802, *1*, 130) refers to William as his cousin. Davy (*Discourse to the Royal Society*, November, 1826 ; *Award of a Royal Medal to John Dalton*, F.R.S. ; *Works*, 1840, *7*, 95–96), uses the word " relation." Sullivan, however, is probably correct about the uncle-nephew relationship. The Oxford Dictionary states that " cousin " was formerly often applied to nephew or niece.

[6] In the National Library, Dublin.

[7] Archdeacon T. O'Rorke, *History of Sligo*, 1890, *2*, 505.

[8] There are references to the possessions of the O'Higgin or O'Huiginn family in the records (in the P.R.O., Dublin) of *Exchequer Inquisitions* (*post mortem* and on attainder) for the county of Sligo (Elizabeth–Charles I). O'Higgin also figures in the genealogies in the Mss *Linea Antiqua* by Roger O'Ferral in the National Library, Dublin. It has not, however, been found possible to link any of these references with direct ancestors of William's grandfather, Bryan (See Appendix). Owing to the land sequestration and the Penal Laws this hiatus is common in Irish genealogy.

[9] See (Miss) Eleanor Knott, *The Bardic Poems of Tadgh Dall O'Huiginn* (1550–1591). *Irish Texts Society*, 1922, *22* ; 1926, *23*. This work contains details of Exchequer Inquisitions relating to O'Huiginn property and also a genealogy to 1650. Miss Knott believes that the name Higgins is from the Norse for a " viking."

[10] The author is indebted to Mrs Eileen MacCarvill of University College, Dublin, for this suggestion. It is of interest to note that Dr John Higgins (*c.* 1678–1729), the son of Dr Patrick Higgins, whose family came originally from Connaught, rose to be Chief Physician to the King of Spain. (Marquis Patrick MacSwiney, *Studies*, 1939, *28*, 63–84).

[11] The grounds for these statements are given in the Appendix, note 2.

[12] Bryan the elder resided in Collooney, about six miles south of Sligo. Sullivan (footnote 2), says William was born in Co. Sligo. (See Appendix, note 4).

[13] William's statement in his *Experiments and Observations on the Atomic Theory*, (1814, p. 7), that he was a very young man in 1788 when he started work on his first book (*A Comparative View of the Phlogistic and Antiphlogistic Theories*, 1789), led previous biographers to assume that he was born about 1766. To William writing when he was over fifty, twenty-five must have seemed young to be engaged in polemics with the great. However, over twenty years ago, R. T. Gunther (*Notes and Queries*, 1929, *157*, 421 ; Dec. 14, 1929), drew attention to an entry in Joseph Foster's *Alumni Oxonienses* (1715–1886) ; 1888, *2*, 657), which reads :—" Higgins, William, s. Thomas, of Mayo, Ireland, gent. Magdalen Hall, matric 6 Feb., 1786, aged 23," and which shows that William was born in 1762-63. (See footnote 27 below). It was in the *Comparative View* that Higgins put forward his new ideas on the atomic theory.

The thanks of the author are due to Mr Edward Keane of the P.R.O., Dublin, and to Mr Lionel E. Salt, formerly Bursar of Pembroke College, Oxford, who independently informed him of the entry in Foster, and to Mr J. C. T. MacDonagh who directed his attention to the entry in *Notes and Queries*.

[14] Since the Higgins family was Catholic, it would have been difficult for him to be educated at other than ephemeral " hedge-schools." On the chance that he might have gone to a school under the protection of the State, enquiries have been made about the archives of some of the 18th century schools in the Sligo district. Records for the Higgins period have not, however, been found. The author's thanks are due to Mr T. H. Blackburn, Headmaster, Sligo Grammar and High School, Mr W. Tate and Mr W. T. Ardill, who have kindly assisted in these enquiries.

[15] In the *Comparative View* (p. xii), William states : " I am indebted to Dr Higgins for my first instructions in chemistry who is a phlogistian." (Some details of the life of Bryan Higgins are given in the Appendix). There is a description and plan of Bryan Higgins's laboratory in *The Operative Chemist* by Samuel Frederick Gray (London, 1828). The author is grateful to Mr E. C. Cripps who drew his attention to this reference ; see also J. C. Hanbury, *Chemistry and Industry*, 1952, 300.

In those days it was necessary for Irish Catholic students to go abroad for professional education. Of thirty-six medical graduates of the University of Edinburgh between the years 1784–90, four were Scotch, six English, one Dutch, one American, and the residual twenty-four, Irish. Kendall, *Proceedings of the Royal Society of Edinburgh*, 1952, *63*, 348, 392.

[16] *Nicholson's Journal*, 1802, *1*, 130. William himself in the *Comparative View*, p. 164, states that he could not follow up an investigation because he was " busy in assisting at a public course of chemistry at Oxford."

[17] Sir Joseph Banks (1743–1820), was President of the Royal Society from 1778 until his death. His house in Soho Square, London, purchased in 1777, became a meeting place of scientists (*Dict. of Nat. Biog.* : *Journal of Sir Joseph Banks*, London, 1896). Higgins (*Comparative View*, 309–310), mentions a visit to Banks's house about April, 1785, to show his method of reduction of nitric acid to ammonia by means of tin. William Austin, who was a friend of Higgins (see footnote 25), mentions (*Phil. Trans.*, 1788, 78, 379–388) the exhibition of this experiment at Sir Joseph Banks's house, some years before. (See Sir Henry Lyons, *The Royal Society (1660–1940)*. Cambridge, 1944).

[18] Richard Kirwan (1733–1812), the famous Irish chemist, was, as will be seen later, William Higgins's patron and friend. He lived in Newman Street, London, from 1777–1787, when he returned to Dublin. His London house, like that of Sir Joseph Banks, was a rendezvous for famous scientists of the day. Higgins (*Phil. Mag.*, 1818, *51*, 172), refers to his " illustrious friend Kirwan."

For an authoritative life of Kirwan see (Rev) P. J. McLaughlin, *Studies*, 1939, *28*, 461, 593 ; 1940, *29*, 71, 281. Other material of biographical interest is contained in : Lady Morgan, *The Book of the Boudoir*, 1829, 54–89 ; John O'Reardon, *National Magazine*, Dublin, 1830, *1*, 330, 469 ; Pickells, *British Association*, Cork, 1843, *Transactions* 39 ; *Proceedings of the Royal Irish Academy*, 1850, *4*, 481 ; M. Donovan, *Proceedings of the Royal Irish Academy*, 1850, *4*, Appendix No. viii, p. lxxxi ; J. O'Neill Mackle, *Reminiscences of Dr. Richard Kirwan*, 1862 (in National Library, Dublin) ; J. Reilly and N. O'Flynn, *Isis*, 1930, *13*, 298–319.

[19] *Phil. Mag.*, 1816, *48*, 410 ; see also *Comparative View*, p. 249.

[20] *Comparative View*, p. xi.

[21] p. 309–313.

[22] Dr Richard Brocklesby (1722–1797) (see *Dict. Nat. Biog.*), was born in Somerset, and educated in Ireland with Edmund Burke. He studied medicine at Edinburgh, graduated M.D. at Leyden and practised in London. He was a friend of Johnson, being mentioned by Boswell, and was a subscriber to Bryan Higgins's " Society for Philosophical Experiments and Conversations " (see footnote 53), which met in 1794. His famous nephew, Thomas Young (1773–1829), physician, physicist and Egyptologist, was also a member (see Arago, *Records of General Science*, 1836, *3*, 245. Arago confuses Bryan and William Higgins and in an editorial note states, wrongly, that William was Bryan's son).

Higgins (*Comparative View*, p. 91) refers to a visit to the Royal Society with Dr Brocklesby to see Cavendish's experiment on sparking nitrogen and oxygen. He mentions an accident to the apparatus that had occurred the day before the visit. In the published account of the work (*Phil. Trans.*, 1788, *78*, 261) the date of the accident is given as 23 January 1788. The author's thanks are due to Professor J. R. Partington and Dr D. C. Martin, Assistant Secretary of the Royal Society, for their help with this reference.

[23] Published in 1799. The work is discussed later.

[24] Dr John Gideon Caulet, M.D. (1750–1786), who was educated at Cambridge, was one of the physicians at St. Bartholomew's Hospital. Higgins (*Comparative View*, 310–312), refers to his chemical work, and incidentally calls him " Caulett." (See W. Munk, *Roll of the Royal College of Physicians of London*, 1878, *2*, 338).

[25] Dr William Austin (1754–1793), was a friend of Higgins (see for example, *Comparative View*, 62, 71–80, 312–313 ; footnote 17, above) and was a physician with a knowledge of chemistry. He obtained the degree of M.D. at Oxford in 1783, and practised in Oxford, being physician to the Radcliffe Infirmary. In 1785, he was appointed University professor of chemistry, but resigned when on August 10, 1786, he became physician to St. Bartholomew's Hospital, London, in succession to Dr J. G. Caulet. He did much to improve the teaching of chemistry in the hospital. There is a passing reference to Higgins in a treatise on the stone (p. 100) by Austin (London, 1791). (Information kindly supplied by Dr Gweneth Whitteridge, Archivist to St. Bartholomew's Hospital ; see also *Dict. Nat. Biog.*).

[26] Magdalen Hall became independent of Magdalen College in 1602, and was converted into Hertford College, Oxford, in 1874. The Principal of Hertford College writes that the records of the old Magdalen Hall have been destroyed by fire. Mr Colin A. Cooke, Bursar of Magdalen College, Oxford, kindly assisted in the enquiries. R. T. Gunther (*Early Science at Oxford*, 1937, *11*, 254 ; see also *Notes and Queries*, 1929, *157*, 421 ; Dec. 14, 1929), says of Magdalen Hall : " Although small in size, the Hall was great in attainment, at least as far as its scientific members were concerned."

[27] Mr Lionel E. Salt, Fellow and formerly Bursar of Pembroke College, Oxford, considers that the entry in Foster (footnote 13), refers to the William Higgins of this article, since it would have been most unusual for a student not to have matriculated and to have escaped inclusion in Foster. *The Dictionary of National Biography* which states that Higgins did not matriculate is probably in error. Although the Foster entry assigns William's father, Thomas, to Co. Mayo, and not to the neighbouring Co. Sligo, Irish gentry of the time moved about leasing estates for short periods. Again, Foster often gives the son's birthplace as the father's residence. (See Appendix footnote 4). While William Higgins matriculated, he did not graduate, though Sullivan states the contrary.

[28] Mr Salt (see footnote 27) states that migration from one College to another was then common.

[29] It may here be mentioned that A. N. Meldrum (*New Ireland Review*, 1909–10, *32*, 350), states that he was not able to obtain the slightest information about William Higgins from the then authorities of Pembroke College. Not only did Mr Salt search his Buttery Books, but he very kindly sent a photostat of a page of a Buttery Book containing Higgins' name and assisted frequently with advice. The author wishes to express his deep appreciation of Mr Salt's assistance.

[30] William Adams (1706–1789), divine, Master of Pembroke College (1775–1789), was a friend of Johnson who visited him at Oxford in 1784. Gilbert[32], Smithson[33], and Beddoes[39] were at Pembroke under Adams. (See Douglas Macleane, *History of Pembroke College, Oxford*, 1897 ; *Pembroke College* (*Oxford College Histories*), 1900 ; R. T. Gunther, *Early Science at Oxford*, 1923, *1*, 60–64 ; 1937, *11*, 277 ; *Notes and Queries*, 1929, *157*, 421 ; 14 Dec. 1929 ; *Dict. Nat. Biog*).

[31] Dr Martin Wall, F.R.S. (1747–1824), reader in chemistry at Oxford (1781–1785), stated that Adams was " considerably deep in chemistry." (R. T. Gunther, *Early Science at Oxford*, 1923, *1*, 64 ; D. Macleane, *History of Pembroke College, Oxford*, 1897, 393). An interesting account of Wall's lectures in chemistry based on the letters of a student John James (1760–1786 ; *Dict. Nat. Biog.*), is given by Gunther (*op. cit.*, *1*, p. 61). In 1785 Wall was elected Lichfield professor of clinical medicine at Oxford. He is mentioned by Higgins on p. 177 of the *Comparative View*. Further details of Wall's life are given by W. Munk (*Roll of the Royal College of Physicians of London*), 1878, *2*, 372 ; see also *Dict. Nat. Biog.*).

[32] Dr Davies Gilbert (1767–1839), president of the Royal Society (1827–1830), matriculated at Pembroke College on 12 April, 1785, and obtained the degree of M.A. in 1789. He brought Davy to the notice of Beddoes (footnote 39). R. T. Gunther (*Early Science in Oxford*, 1937, *11*, 279 ; *Notes and Queries*, 1929, *157*, 421) refers to Davies Gilbert as Gilbert Davies.

[33] James Smithson, F.R.S. (1765–1829), founder of the Smithsonian Institute at Washington, matriculated at Pembroke College, Oxford, in 1782, and was soon distinguished as a student of mineralogy and chemistry. *Dict. Nat. Biog.*

[34] *Phil. Mag.*, 1819, *53*, 405.

[35] Dr James Haworth (*c.* 1762–1823), matriculated December 7, 1782, at Brasenose College, Oxford. He was awarded a Radcliffe travelling fellowship in 1791, and was the first of the travelling fellows to visit the New World. He was appointed a physician to St Bartholemew's Hospital in 1802. (W. Munk, *Roll of the Royal College of Physicians*, London, 1878, *3*, 11 ; see also *A Picture of the Present State of the Royal College of Physicians of London*, 1817, 81).

[36] Information supplied by Mr L. E. Salt. See footnote 29.

[37] *E.g.*, *Comparative View*, 164, 176, 300, 312–313.

[38] See footnote 16 and corresponding text.

[39] Thomas Beddoes (1760–1808), chemist and physician, matriculated at St John's College, Oxford, in 1775, but in 1776 migrated to Pembroke. Later he studied medicine in London and Edinburgh and obtained the degree of M.D. (Oxford), in 1786. He was appointed public reader in chemistry in 1788, and attracted the largest class that had been assembled in chemistry in Oxford since the 13th century. He resigned his readership in 1792, and in 1798 he established a " Pneumatic Institution " at Clifton for the treatment of disease by inhalation, and there engaged Humphry Davy as its superintendent. He married in 1794, Anna, sister of Maria Edgeworth (1767–1849), the Irish novelist and daughter of Richard Lovell Edgeworth (1744–1817), writer and educationalist (*Dict. Nat. Biog.*,; J. E. Stock, *Memoirs of the Life of Thomas Beddoes, M.D.*. London, 1811). Davy described Beddoes " As little fitted for a Mentor as a weather-cock for a compass." (Kendall, *Journal of the Royal Society of Edinburgh*, 1952, *63*, 350, 392). He contributed a paper to the Chemical Society of the University of Edinburgh in 1785–86, and in 1789 informed Black as he informed Higgins that Priestley had overthrown Lavoisier's theory. (Kendall, *loc. cit.*, 392).

[40] Implied by Stock (footnote 39), p. 18.

[41] *New Ireland Review*, 1909–10, *32*, p. 351.

[42] Mr L. E. Salt (footnotes 27–29) states that appointments earlier than the nineteenth century were made as funds permitted ; the level of the appointment was similarly determined. Thus Austin resigning as professor in 1786, was not succeeded by Beddoes as reader until 1788.

[43] *Comparative View*, p. xiii, 283.

[44] *Letter and Papers*, Decade ix, No. 82. Higgins seems to have had an interest in medical chemistry. On p. 304 of the *Comparative View*, Higgins refers to a discussion with Beddoes, who did not become reader until 1788. As the paper was finished before April, 1787, the discussion may have taken place when Beddoes was in Oxford to receive the M.D. in December, 1786.

[45] *Journal Book of the Royal Society*, p. 169. The author wishes to express his gratitude to the Officers and Librarian of the Royal Society for their help.

[46] Higgins states (*Phil. Mag.*, 1816, *48*, 364 ; 1819, *53*, 405 ; *Atomic Theory*, p. 7), that he wrote the *Comparative View* in 1788 and published it in March, 1789. A second edition was published in 1791 (see footnote 13).

[47] Information kindly supplied by Dr F. Sherwood Taylor, Director of the Science Museum, London. The building now houses the Museum of the History of Science of which Dr. Taylor was formerly Curator. The Ashmolean Museum was founded by the English antiquarian, Elias Ashmole (1617–1692). Dr Taylor states that nitre still grows on the walls of the room in which Higgins worked. A bottle containing nitre and labelled " Nitre from the walls of the Museum " was recently found by the present Curator, Dr C. H. Josten. It may have been filled and labelled by Higgins.

[48] *Comparative View*, p. 177. John James (footnote 31) refers to Wall's interest in nitre. (Gunther, *Early Science in Oxford*, 1923, *1*, 63 ; *Dict. Nat. Biog.*).

[49] See footnote 15. A later work of Bryan (*Minutes of the Society for Philosophical Experiments and Conversations*, 1795), shows that he afterwards adopted Lavoisier's views.

[50] *Atomic Theory* (see footnote 13), p. 10.

[51] The *Monthly Review*, 1789, *81*, 197, gives the price as 7s. *The Analytical Review*, 1789, *4*, 177, the *English Review*, 1790, *15*, 188, and the *Critical Review*, 1790, *70*, 545, state 6s. Messrs John Murray, London, who published the *Comparative View*, have kindly made a search of their records, but have been unable to find any reference to their transactions with William Higgins.

[52] British Museum Mss., No. 38392/f/104. See also Board of Trade, *Minutes* (B.T. 5), Volume 6, p. 204, Public Record Office, London.

[53] The Ambrose Godfrey mentioned was probably a grandson (*d.* 1797), of Ambrose Godfrey Hanckwitz (1660–1741), Boyle's assistant, two of whose sons Ambrose and John, carried on their father's business as a manufacturing chemist in Southampton Street (see footnote 58) on the south side of Covent Garden where it was continued until about 1862 under the name of Godfrey and Cooke. The third son, Boyle, settled in Dublin, and his son Ambrose succeeded to his uncles' business. Ambrose Godfrey and Charles Gomond Cook (*sic*) both of Southampton Street, were subscribers to Bryan Higgins's " Society for Philosophical Experiments and Conversations " which met in 1794. The list of subscribers is given in the Minutes published in 1795. Cooke is mentioned in Ambrose Godfrey's will (Somerset House, London ; Probate Book (Exeter), folio 239). (See R. B. Pilcher, *Royal Institute of Chemistry Lectures* : " Alchemists in Art and Literature," 1933, 45 ; " A Century of Chemistry : From Boyle to Priestley," 1940, 8, 22 ; *Ambix*, 1938, *2*, 17 ; see also *Dict. Nat. Biog.* ; M. E. Weeks, " Discovery of the Elements," Easton, Pa., 1945).

[54] On the title page of the *Comparative View*, Higgins also describes himself as of Pembroke College, Oxford.

[55] See the *Acts of the Irish Parliament* and the *Journal of the Irish House of Commons*. The Hall is now called the " Apothecaries' Hall." The account of Higgins's connection with the Hall is based on the original Minute Book. Capitals, spelling and punctuation in extracts from the minutes are as in the somewhat capricious original. The author is greatly indebted to a previous Registrar, the late Dr J. T. Daniel, and to his successor, Miss Mary J. Barnett, now Mrs Carroll, who made the Minute Book freely available. Sullivan had to depend on a few abstracts made by a medical friend, Dr Charles H. Leet, and these have had to serve other biographers.

[56] The Directors were ahead of most moderns in their appreciation of the difference between a chemist and apothecary. It is of interest to note that Dr. John Berkenhout in the preface to his *First Lines of Theory and Practice of Philosophical Chemistry* (London, 1788), writes " Persons, who know nothing more of Chemistry than the name, naturally suppose it to be a trade exercised by the shopkeepers, called *Druggists and Chemists*, who are thought to be chiefly employed in preparing medicines for the use of apothecaries ; . . ." There are several references to Bryan Higgins in Berkenhout's book.

In a paper (*Trans. Roy. Irish Acad.*, 1794, *5*, 244), on " Experiments on a New Earth found near Stronthian (*sic.*) in Scotland," Kirwan states that he was assisted in his experiments " by Mr Higgins, superintendent of our Apothecaries Hall, whose chemical abilities are well known, and likely to be eminently useful to this country." Higgins was chemist not superintendent ; the latter term never occurs in the Minute Book. Kirwan has misled a number of Higgins's biographers.

[57] Higgins's salary with no income-tax would together with his lodging and perquisites (10 tons of coal and 50 lbs. of candles per annum) amount to about £1,000 per annum at present values. (Information supplied by Senator Professor George O'Brien, Litt.D.). He was under thirty, so that his salary compares favourably with that of a modern chemist of the same age. Higgins was the highest paid of the Hall's officials, the Apothecary the next in rank received £80 per annum (Meeting of April 8, 1794). The salary first fixed for the chemist was £150 per annum.

[58] The rate-books (in Holborn Town Hall) for the Red Lion Square area give the name of the householder in 1791 as Eleanor Newton with the name Mary Scott in pencil above it. For 1792–3 the name is Henry Scott. It would seem, therefore, that Higgins lived in lodgings. (Information supplied by Mr Edmund Nicholls). No. 37 Dombey Street, formerly East Street, in Holborn, near Southampton Row, was destroyed in an air raid in the last war. Higgins's residence was near Godfrey and Cooke's business (see footnote 53). Another son of Oxford, one greater than Higgins, was later associated with East Street ; Cardinal Newman's father and mother lived at No. 13 in 1822. (O'Faolain : " Newman's Way," London, Longmans, Green and Co., Ltd., 1952).

[59] Higgins's letter reads as follows :—

London Jany. 6, 1792, 37 East St., Red Lion Sqr.

Sir

I had the honor of receiving your letter respecting the Office which I am to hold in the new Establishment in Dublin.

You will be kind enough to transmit my best thanks to the Court of Directors for the very favourable sentiments they are pleased to entertain of me, which it will always be my particular ambition to deserve.

I hope I shall soon have the Satisfaction of hearing that they have been fortunate in meeting with a convenient and Spacious plot of ground for the intended purpose.

I have the honor, to be, Sir

Yr. very Obt. Servant,

Wm. Higgins.

[60] Higgins' appointment dated from March 20th, 1792 ; he was not appointed in 1791 as previous biographers have stated. Every officer upon appointment had to give security for the faithful discharge of his duty. (Minute, dated September 14, 1791).

[61] Higgins' duties were listed as follows :—" to receive Such Simples from the Committee of Directors (as may be necessary) To Prepare the Chymicals or Galenicals Ordered by the Court or Committee of Directors and to give a Receipt or Receipts for the Same to prepare all Such Chemicals and Galenicals as may be ordered by the Committee of Directors and none other in the Best Possible Manner to endeavour to turn all caput Mortuums and Residuums to advantage and to have a general attention to Oeconomy to lay before the Court of Directors or any Committee appointed by it for the purpose of attending to his Department an Account of all preparations made by him and their respective Products and at least once in every Week lay before the Court of Directors an Account of all Utensils Received, Impaired, or Broken, and lay before the Same Court or Committee all Chymicals and Galenicals when finished for their Imputation. To lay before the Court of Directors or its Committee any alteration or Amendment that he may deem proper to Make in the Laboratory or its Vaults." In connection with the laboratory of the Apothecaries' Hall, see *History of the City of Dublin*, by J. Warburton, J. Whitelaw and R. Walshe, 1818, *2*, 747.

[62] Thomas Conolly (1738–1803) was member for Londonderry in the Irish Parliament (1761–1800), while in the British Parliament he was member for Malmesbury (1759–1768), and for Chichester (1768–1784). He held various offices in Ireland and was one of those who advocated the union. The *Dictionary of National Biography* quotes that " bad as a statesman, worse as an orator, he was as a sportsman, pre-eminent."

[63] It may be of interest to give the results of an analysis of a water as carried out in 1794 ; the extract is from the Minute Book of the Hall.

" A Wine Gallon of the new Spa, such as sent to me and said to be lately discovered near Leixlip on the Estate of the Rt. Honble. Mr Connolly (*sic.*) contains
of Muriated Mineral Alkali dried in the Temperature of 200 Fraenheit's

| | |
|---|---|
| (*sic.*) Thermom. .... .... .... .... .... | 30.37 |
| Muriated Vegetable Alkali .... .... .... .... | 2.07 |
| Vitriolated Vegetable Alkali .... .... .... .... | .7 |
| Muriated Lime .... .... .... .... .... | 8.73 |
| Vitriolated Lime .... .... .... .... .... | 1.0 |
| Aerated Lime .... .... .... .... .... | 13.44 |
| Muriated Magnesia .... .... .... .... | .97 |
| Argil or Clay .... .... .... .... .... | .50 |
| Silex or Earth of Flints .... .... .... .... | .25 |
| Bituminous matter .... .... .... .... .... | .14 |
| Found to yield in the temperature 212 | |
| Barometer 29.35 Thermometer 70 | Cubic Inches |
| of Fixable Air .... .... .... .... | 1.50 |
| Atmospheric Air .... .... .... .... | 2.15 |

[64] This is perhaps an indication of Higgins's tendency to be difficult. At the same meeting the Directors sanctioned the appointment of an assistant to Higgins at £50 per annum.

[65] William Wentworth, Earl of Fitzwilliam (1748–1833), was appointed Lord Lieutenant of Ireland in December, 1794, but was recalled within three months on account of his desire for catholic emancipation. He was succeeded by the Earl of Camden (1759–1840), who had some responsibility for a policy which led to the rising of 1798.

[66] Henry Grattan (1746–1820) played a prominent part in obtaining legislative independence for Ireland in 1782. He strongly opposed the union of the British and Irish Parliaments. He was one of the greatest of Irish statesmen and orators. (See *Dict. Nat. Biog.*).

[67] Sullivan (see footnote 2) wrote :—" Whether the Company thought the salary so very high, that they did not think any amount of work on the part of their chemist sufficient, or for some other reasons, Higgins did not remain with them more than two or three years." Actually he was there from March 20, 1792, to June 20, 1795.

Meldrum (*New Ireland Review*, 1909–10, *32*, 352), wrote " He (Higgins) gave up a post at the Apothecaries' Hall worth more than £200 a year for one at £100, and no reason has ever been offered for this. I suggest that with his uncle's (Bryan Higgins) example before him he had felt the impulse to give lectures and take pupils in chemistry, that he was not at liberty to do so at the Apothecaries' Hall, and that he went to the Dublin Society in the expectations that there he might teach if he would."

McLaughlin (*Three Centuries of Irish Chemists* ; edited by D. Ò Raghallaigh, Cork University Press, 1941, 3), states that the Dublin Society " stole " Higgins from the Apothecaries' Hall.

[68] In 1820 the title " Dublin Society " was changed to " Royal Dublin Society," when George IV, as a mark of appreciation of the loyal address presented by the Society on his accession, was pleased to become Patron of the Society.

# Hibernian Latin

*by* LUDWIG BIELER, PH.D.

'HIBERNIAN Latin'[1] is not a distinct and definable species of Latin. It is merely a convenient label for the Latin writings of the early Irish Church. The term, however, has its justification. Latin as written by the Irish from the sixth to the eleventh century does show certain peculiarities that can be explained by the special conditions under which Latin studies were pursued in ancient Ireland.

The island of Hibernia was not a province of the Roman Empire. As Bury first pointed out, it was the one and only country outside the Empire to which the Roman Church extended in antiquity. It was the preachers of the Gospel who introduced there the Latin language. Thus, what the Irish cleric learnt was not Latin but Church Latin. For the first time, and, as far as I can see, also for the last time in the history of civilization, a group-language was learnt as a foreign language outside the area where the common language was still spoken.[2]

Throughout the Western Empire, Christian Latin developed as a typical 'group-language' out of a certain historical situation of living Latin. This Latin was already a very complex entity as is every language that has transcended its zenith. Spoken and literary language, spontaneity and the tradition of the schools, together with many other heterogeneous elements, interacted in ever new combinations. Between them all, influenced by them in varying degrees and influencing them in turn, Christian Latin had its own linguistic history. With the Irish mission, this idiom was brought to a country where no Latin had been heard before—except, perhaps, the names of some imported goods, for example, of wine. The group-language now leads a new kind of existence. It develops in isolation, in the midst of a society that speaks a foreign tongue. The comparative separation of Ireland from the Continent that lasted for nearly two centuries made this situation even more critical. It is in this cultural *milieu* that "Hibernian Latin' grew up.

The ecclesiastical Latin that was transplanted to Ireland came from two different parts of the Roman West—Gaul and Britain. Celtic scholars tell us that the Latin loan-words in Old Irish differ phonetically according as they came from the one province or the other. There is, however, more to it than this. The very nature of the impulses was different. The original mission to Ireland started from Gaul. It was purely religious, untainted by any sort of humanism. The great monastic

[1] This article is based on a paper read before the First International Conference on Patristic Studies, Oxford, 1951.

[2] The partial Latinization of Eastern Europe in the later Middle Ages differs essentially in this: that Latin was then already a language without a nation.

movement of the sixth and the following centuries, on the other hand, seems to have been inspired largely from Western Britain. In this corner of the Roman world there had survived traditions of learning—restricted, to be sure, to monastic needs, and grown a little queer and eccentric in not too congenial circumstances, but still capable of acting as a powerful stimulus. It is there that the Irish came in contact with remnants of classical literature. It is there, too, that originated the 'culture-fungus of decay'—to use an expression of the late Professor Eóin MacNeill—that goes under the name of *Hisperica Famina*.[1] The Irish took to all this, but with discretion. Out of the several elements they made something of their own, which shows for the first time in the writings of St Columbanus.

Hibernian Latin is unique also in that it developed in the midst of a vernacular that had produced already a great, though still unwritten 'literature'—or, to put it more precisely, in a country with a tradition of native poetry and learning. One would expect to find traces of this cultural *milieu* in the Latin writings of the ancient Irish. This problem has been much discussed. The late Rev. Charles Plummer, Mario Esposito, Père Grosjean, W. G. Most, and recently Einar Löfstedt[2]—to mention only the most important names—have entered into the debate. Direct contacts can seldom be proved. We cannot doubt the influence of the Senchus Mór on the treatise *De duodecim abusiuis saeculi*, or the Irish original behind Bishop Patrick of Dublin's *De mirabilibus Hiberniae*. On the whole, however, great caution is indicated, especially in the field of linguistics. The two languages, Irish and Latin, are too different, and the Irish students were too thoroughly grounded in the new idiom to allow their native language to interfere much with the language of the Church. It is with the lesser writers, in particular with certain hagiographers, that we find such expressions as *tabulata facie* 'board-faced' (*clár-enech*), or *abgitorium* (probably an abecedarian text, perhaps Psalm 118[3]—Ir. *abgitir*), or the use of *alius* for *quidam*, reflecting the two meanings of Ir. *alaile*. The general trend was in the opposite direction. Latin texts were translated into Irish, and the Latin original often shines through. There are even texts written in a queer mixture of Latin and Irish.

The isolation of Hibernian Latin accounts possibly also for an epoch-making innovation in Latin poetry—the creation of the rhymed stanza, which Raby and other scholars attribute to the Irish.[4] A discussion of this problem, however, lies outside the scope of this article.

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[1] It has often been thought that the *Hisperica Famina* are of Irish origin. In my opinion, the conditions for the birth of this peculiar Latinity existed nowhere except in Western Britain.

[2] Coniectanea I (1950), p. 47 f.

[3] This was suggested to me years ago by some learned friend—if I remember correctly, by the late Dom Bede Lebbe.

[4] See F. J. E. Raby, A history of Christian Latin poetry (Oxford, 1927), pp. 131–40.

What, then, are the characteristics of Hibernian Latin? To this question there is as yet no accurate and exhaustive answer. Most conspicuous are some peculiarities of spelling. Old Irish was spelled the same way as Western British, i.e. the spirants were expressed by the *mediae,* and the *mediae* by the *tenues* (*b d g* stand for *bh dh gh,* and *p t c* stand for *b d g*). The same shift occurs in post-Roman Latin inscriptions of West-Britain.[1] We find it also, but less regularly, in Hiberno-Latin manuscripts.

Other features are the irregular duplication or simplification of consonants, in particular of *s* (*missit, misus; gresus; iusa,* etc.), and verbal forms of the type *uidiarunt*—so, frequently, Codex Usserianus II ($r_2$). Whether these spellings can be explained by reference to Old Irish I do not feel competent to assert. I do think, however, that many other spellings that are characteristic of Hiberno-Latin manuscripts of the eighth and ninth centuries[2] are ultimately derived from the biblical and liturgical manuscripts brought to Ireland by the early missionaries. The matter calls for further investigation. One fact, at least, stands out clearly: we have not to do with a set of regular phonetic changes (not even of changes in phonetic representation), but with more or less consistent spellings of individual words, for ex., *aeclessia babtizare herere misus profeta zabulus.*

More can be said for a certain 'Hibernian' element in vocabulary and phraseology. Such traces are discernible even in the Latinity of St Patrick, who was not Irish by birth. Generally speaking, however, the native idiom of a writer to whom Latin is an acquired language, in Ireland as elsewhere, seldom manifests itself very perceptibly. It stands to reason that such writers will almost instinctively choose, out of a number of synonyms, the one expression that is nearest to their own *Sprachdenken.* However, as long as this expression is Latin, the presence in the writer's mind of an alien model or linguistic pattern cannot be convincingly demonstrated. Our methods of linguistic analysis are still inadequate to subtleties of this kind. A case in point is Patrick's *sugere mammellas* (Confessio, c. 18), which is the old Latin of Oseas 14, 1 (k), but, at the same time, corresponds literally to the Irish phrase *dide a ciche-som* (he sucked his breast), a technical expression denoting a rite of seeking protection, of which the writer was probably thinking.[3]

The morphology of Hiberno-Latin writers is on the whole correct. They knew their Priscian, and had no vulgar Latin speech habits to

[1] E. MacNeill, Studies XX. 47 f.

[2] For example, in the Schaffhausen Adamnan, cf. Dr Reeves' edition, pp. xvi. ff.; in the Book of Armagh; even in Continental transcripts of Hiberno-Latin poetry, see L. Traube's index in *Poetae Aevi Carolini* III. 795 f.

[3] See Rev. J. Ryan, I.E.R., 5. ser., LII. 293–9; M. A. O'Brien, Etudes celtiques III. 382 f.

fight. Their syntax is late Latin, largely biblical—again with the possibility of a slight native element.[1]

The characteristic ' flavour ' of Hibernian Latin is primarily a matter of style. To put it briefly, it is a blend of the ecclesiastic, the humanistic, and a certain euphuistic strain—often pervaded by a note of freshness that was rare in the Latin world of those days. I refer to such authors as Columbanus, Muirchú, or Sedulius Scottus. With the Irish scholars of Carolingian France, Hiberno-Latin becomes absorbed in the current of Medieval Latin ; it survives, without further development, in the homeland until the Norman conquest.

All this, admittedly, is in the nature of impressions rather than of tested statements. Further progress in this field will depend on up-to-date editions and more intensified studies of Hiberno-Latin texts.[2] Thanks to the labours of Mario Esposito and James F. Kenney, the manuscript materials are largely known. The National Library of Ireland, under its director Dr R. J. Hayes, is building up a microfilm collection of all manuscripts of Irish interest—a collection which, it is hoped, will become a centre of Hiberno-Latin as well as of Irish linguistic and historical studies. The Dublin Institute for Advanced Studies has recently sanctioned a comprehensive scheme for editing Hiberno-Latin texts.[3] These are the foundations on which must rest our next task—a detailed linguistic analysis not only of Hiberno-Latin texts but of all Hiberno-Latin manuscripts, whatever their contents. Towards the interpretation and synthesis of these findings classical, patristic, and Celtic scholars must work together. The way is long, but our efforts will be amply rewarded.

LUDWIG BIELER

[1] For a later period, this is lucidly pointed out by W. G. Most, Syntax of the Vitae Sanctorum Hiberniae. Washington 1946.

[2] Very few good editions are in existence except those included in Monumenta Germaniae Historica.

[3] Scriptores Latini Hiberniae. The first volume (The Writings of Bishop Patrick of Dublin, ed. Rev. A. Gwynn, S.J.) is ready for the printers.

# Cardinal Gibbons and the American People

*by* AUBREY GWYNN, S.J.

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FATHER TRACY ELLIS is Professor of American Church History in the Catholic University of America ; and Cardinal Gibbons did as much as any other man to bring the Catholic University into existence at Washington in 1887–8. These two handsome volumes are thus in a sense a tribute of filial gratitude to a great American prelate, but they are also a very solid proof that the Faculty of Church History at Washington is well equipped for the great task of telling the story of the Church's phenomenal progress in the United States during the nineteenth and twentieth centuries in a series of monographs and biographies, planned and executed according to the strictest canons of modern historical research. Those who were fortunate enough to know the late Mgr Peter Guilday, whose place Father Tracy Ellis has now taken in the Catholic University, will know that this new school of American Church History owes much to the teaching and inspiration of Alfred Cauchie at Louvain. Mgr Guilday was for many years editor of the *Catholic Historical Review*, and he founded and organized the American Catholic Historical Association. His biographies of Archbishop Carroll and Bishop John England, his *History of the Council of Baltimore* (1791-1884) and a series of shorter monographs and essays pointed the way to a more scientific approach to a field of study in which that valiant Catholic layman, John Gilmary Shea, had been a pioneer. The name of John Gilmary Shea was often on Mgr Guilday's lips, and it recurs frequently in the pages of this new biography of Cardinal Gibbons. For priests and laymen alike looked to Shea in the last quarter of the nineteenth century as the recognized master of American Catholic history. He died in 1892, when Cardinal Gibbons was still involved in some of the most difficult and stormy controversies of his long life. He would have rejoiced to see so fine and objective a summary of all those ancient and now half-forgotten controversies, written by one who was first an alumnus and is now a professor in the new Catholic University of America.

James Gibbons was born in Baltimore on 23 July 1834, and was thus a native American citizen. Yet the story of his childhood and education belongs to Co. Mayo. For his father, Thomas Gibbons, was born at Tourmakeady in 1800, and his mother, Bridget Walsh before her marriage, was born in the nearby village of Tooreen in the Partry district. Two girls had been born to them before Thomas decided to emigrate with his family in 1830. After a short stay in Canada, they settled in Baltimore, where Catherine, James and

*The Life of James Cardinal Gibbons*. By John Tracy Ellis. 2 vols. Milwaukee : Bruce. 1952. 7 dollars.

John were all born. Their father was employed as a clerk in a commercial firm, and business in Baltimore was prosperous during those years. But the climate did not suit the father's health, and the whole family returned to Ireland in 1837, when the future Cardinal of Baltimore was three years old. They settled in Ballinrobe, where Thomas Gibbons was able to buy himself a farm, and at the same time open a grocery business in the town. Here the youngest child of the family (Thomas) was born ; and here young James Gibbons got his schooling. He went first to the school of Mr Jennings in Abbey Street, where he was a schoolfellow of a future Bishop of Galway, Dr Francis McCormack ; and then to the private school of Mr John J. Rooney. Ballinrobe may well take pride in the fact that these two local schools gave his first opportunity to a young boy who was destined to become the most famous of American Cardinals ; and it is plain from later letters and reminiscences that Cardinal Gibbons looked back with real gratitude to those early years, especially in Rooney's school. Meanwhile the famine years came and went. Thomas Gibbons, the father of this Mayo family, died of the ' famine fever ' in April 1847. It was a hard blow, and the mother was left to face an uncertain future. For five or six years she struggled on at Ballinrobe ; but the call of the New World, with its many opportunities and the promise of better things, was heard. The whole family once more emigrated to America in January, 1853 ; this time they chose New Orleans as their home. James Gibbons, now in his nineteenth year, gained employment as a clerk in the store of a Presbyterian merchant, William C. Raymond, who proved himself a loyal and most kindly friend in times that were often hard enough. Finally, thanks to a mission given by Redemptorist Fathers in New Orleans (one of whom was later to become famous as Father Isaac Hecker), young James Gibbons was advised to study for the priesthood. A first sign of his shrewd instinct for the wise decision may be found in his resolve to seek admission in the seminary of Baltimore, where his father had once been prosperous and where he himself had been born.

That is the simple, but most enlightening background to what was to become a singularly long and successful career. Most of all, it helps us to understand the future Cardinal's deep sense of gratitude to the country which had given his parents and kinsfolk an open road to success in a free country ; but it throws light also on the Cardinal's natural affiliations with the Irish element in American Catholic life. More and more, he was to become the leader and spokesman of those, many of them born Irishmen, who maintained that the first duty of American Catholics in things temporal was to be loyal to their country, whether it was the country of their birth or the country of their adoption. Opposed to this view, especially in the 'eighties and 'nineties of last century, was a strong body of German-American Catholics, who dreaded the influence of Anglo-Saxon thought, and who were convinced that the strongest influence for maintaining old German Catholic traditions was loyalty to German pastors, German customs and German speech. Looking back on this sharp controversy from the middle of the twentieth century, it is easy to see that the Cardinal was right ; but it is impossible not to feel genuine admiration and respect for those German bishops and priests who fought so stoutly, though with little success, for the cause in which they believed. An American Benedictine scholar, Father Colman J. Barry, O.S.B., has recently made a careful study

of this whole problem in a volume which had not been printed when Father Tracy Ellis published his biography : *The Catholic Church and German Americans* (Milwaukee, 1953). But the main facts will be found in a chapter entitled ' Nationalities in Conflict ', which fills nearly sixty pages in the first volume of this *Life of Cardinal Gibbons.*

Another recent monograph, issued by the Catholic University in 1943, treats of a controversy that was soon confused with the opposition of two national traditions : *The School Controversy, 1891–93,* by Father Daniel F. O'Reilly, O.P. (1943). Cardinal Gibbons was a firm believer in the American way of life ; and he was also convinced that, viewed in contrast with modern European trends of thought, the American attitude to education, whether Catholic or non-Catholic, was fundamentally and deeply religious. Hence his willingness to support, in public and even more in private, the bold defence of American schools which brought such a storm of criticism on the out-spoken Archbishop of St Paul, John Ireland. German Catholics were far more conservative, and Jesuit educationalists, both in America and at Rome, were actively opposed to Ireland's policy. But Cardinal Gibbons, as these volumes make abundantly plain, could be a very loyal friend—even though Archbishop Ireland complained more than once of the Cardinal's weakness. To the end Gibbons defended the Archbishop of St Paul, and worked persistently to secure for him official recognition symbolized by the Red Hat. In that Cardinal Gibbons failed ; but he did succeed in persuading the Roman authorities that American secular education was less dangerous and less anti-clerical than French or Italian secular education. What he would say to-day, is not perhaps so clear.

It was for his success as an American spokesman in the Roman Curia, and for his singular gifts as intermediary and peacemaker between conflicting policies and personalities, that Cardinal Gibbons won the constant esteem and gratitude, not only of American Catholics, but in the end of the whole American people. He was, unswervingly and from first to last, a churchman : he had a cause to defend, a gospel to preach, and he never concealed his faith from any man. But he was also an American citizen, with an almost uncanny insight into the typical American citizen's point of view. Again and again, in the pages of this biography, we find the other American bishops turning to Gibbons for advice, trusting his judgment in moments of crisis. He had been fortunate in his first experiences of priestly life. Ordained in the summer of 1861, he served for a short time as chaplain to two military posts in Maryland ; and was from the first an ardent support of the Federal cause. His first experience of parish life was as pastor of two small country parishes, separated by the wide Patapsco river. Then came transference back to the city of Baltimore, this time as secretary to Archbishop Spalding. Within a few months of this appointment Father Gibbons found himself immersed in all the routine business preliminary to the sessions of the Second Plenary Council, which met at Baltimore in October, 1866. It was a wonderful preparation for his later work as Archbishop and Primate, and for his responsibilities as president of the Third Plenary Council in the winter of 1883–4—responsibilities so well met that it was only a question of time before Rome recognized the Archbishop's worth by the Red Hat, which was conferred in the summer of 1886. In like manner, his

training for episcopal government benefited from the double chance of experience in a backward country diocese as Bishop of North Carolina (1868–72), and then for five years as Bishop of Richmond. Natural gifts of government James Gibbons had from the start ; but Providence made the way easy for future success by the exceptionally varied work that fell to him as a young man.

Catholic democracy is a concept which is familiar to us all to-day, and nowhere more familiar than in Ireland since the life's work of Daniel O'Connell. But it was a concept very much less familiar to the conservative schools of thought which were dominant in France and Italy during most of the Cardinal's lifetime. Here, perhaps more than anywhere else, we can sense the secret of his immense popularity with Americans of every class and creed. It was in 1886, at the very time when Leo XIII had created him a Cardinal, that Gibbons was given his great opportunity of defending organized American labour, and in particular the Knights of Labor, whose programme of reform owed a good deal to the attractive slogans of Henry George. Condemnation of the movement as a secret society was being urged strongly by some of the American bishops ; but the majority saw plainly that condemnation might well have the effect of driving a large number of impoverished American workers away from the ranks of loyal Catholics. Cardinal Gibbons, to his everlasting credit, was immediately and strongly conscious of this danger, and his great influence at Rome averted what was beyond all doubt a real danger to the Catholic Church in the New World. The Knights of Labor soon fell into discredit for other causes, but the Catholic working man had learned to see in his priest, and in the American hierarchy, natural allies in a struggle for social justice. In the course of the controversy, owing to an unlucky personal issue, Cardinal Gibbons found himself drawn into an acute and most embarrassing dispute with Archbishop Corrigan of New York. It was a personal difference of opinion that was followed by other personal disagreements, and was thus the cause of a good deal of unpleasantness in times to come. But on the main issue the Cardinal was unquestionably right, and the three chapters in this biography entitled ' Secret Societies ', ' The Knights of Labor ' and ' The Case of Henry George and Dr McGlynn ' will repay close study. Once again I may be allowed to cite another monograph of the Catholic University : *The Catholic Church and the Knights of Labor,* by Father Henry J. Browne (1949). Another important chapter in this biography, with the brief but significant title 'Americanism ', tells the full story of a half-forgotten heresy-hunt from authentic, contemporary and most illuminating documents.

One of the most remarkable features of this long biography is the great freedom which so many American Bishops have granted the author in access to their diocesan archives ; and Father Tracy Ellis has used his opportunity to the full. The reader will find more than one unexpectedly frank and piquant phrase in the many letters cited in this biography. Bishop Bernard J. McQuaid of Rochester (who appointed one of his own priests to write his official biography within his own lifetime, and who has thus had the advantage of an opening speech in this great debate) was a constant and frequently somewhat malicious critic of the Cardinal's policy ; and his influence on Archbishop Corrigan of New York did nothing to make things easier for the Cardinal in America's

greatest centre of Catholic population. But the frankness with which Father Tracy Ellis has used his sources, and the constant accuracy with which he cites them in his foot-notes, has the effect of commending his biography to the serious reader as both trustworthy and, on most issues, convincing. His own final assessment of the Cardinal's character is, as we might expect, most favourable—if critical of certain defects. That the Cardinal enjoyed his high dignity, and was fond of pomp and ceremony, was plain for all to see ; but it did not cut him off from the sympathy of a most democratic people. That he sometimes went too far in expressing deference to Roman opinion, when his own views were very much in the opposite direction, is admitted plainly by Father Tracy Ellis ; but it is only fair to remember that the Cardinal was dealing with Pope Leo XIII. That he was sometimes so eager to conciliate as to give the impression of a weak and hesitating policy, was particularly plain in the first years after his elevation to the Sacred College ; and it is immensely to the credit both of himself and of his lifelong friend, Denis J. O'Connell—who served the American hierarchy faithfully, first as Rector of the American College in Rome, then as Rector of the Catholic University at Washington, and finally for a short time as Bishop of Richmond—that Mgr O'Connell, as he then was, had the courage to write in plain terms to the Cardinal concerning this defect in his character, and that the Cardinal never thought a penny the worse of his friend for this plain speaking.

My own impression, for what it is worth, is that inevitably as the years went by, and as the Cardinal of Baltimore came to be more and more universally acclaimed as the greatest living American citizen, the personal characteristics which had done so much to make him the man he was tended to become obscured in the representative figure of a great Church and a great Nation. Readers of *Studies* may be reminded that Mr. Shane Leslie (as he then was) contributed to our issue of September, 1931, a vivid impression of the aged Cardinal's conversation, with some personal reminiscences, of a prelate who could look back over more than fifty years of pastoral work as an American Bishop, Archbishop and Cardinal-Primate. From the discreet account which is given in one of the last chapters in this biography, we hear that both Mr De Valera and Archbishop Mannix sought an interview with the Cardinal, then a very old man, after the Allied victory in the first World War ; the two interviews may fairly be described as courteous, but discouraging. President Wilson had not been noted for his personally friendly relations with the Cardinal, and rumours were current that he had even shown the Cardinal grave discourtesy. These rumours were false, but the Cardinal was not the man to risk his position as representative of American Catholic life for the sake of any non-American political cause, even if that cause concerned the country that had been the birthplace of his own parents, and which had given him his first schooling. But that, all things considered, was a wise and far-seeing policy for an American Primate and Cardinal. Any fair-minded reader of these two volumes will, I think, close them with the feeling that he has been reading the story of a life that has perhaps no clear mark of personal greatness ; but that nonetheless achieved greatness by qualities of exceptional wisdom and charity, and by steadfast loyalty to what the Cardinal himself openly proclaimed as the ' Faith of our Fathers '.

AUBREY GWYNN

# Reviews

## PATROLOGY

*PATROLOGY.* By Johannes Quasten. *Vol.* 1, *The Beginnings of Patristic Literature* (xviii and 349 pp.) ; *Vol.* 2, *The Ante-Nicene Literature after Irenaeus* (xi and 450 pp.). Utrecht and Brussels : Spectrum Publishers. Vol. 1, 1950 ; Vol. 2, 1953.

THESE two fine volumes form the opening of a history of ancient Christian literature which is unique in English and hardly rivalled in any language. Nothing so scholarly and comprehensive has ever been placed at the disposal of English-reading students, since such translations of French and German works as were available were years behind their times when they appeared, and are today of course still less satisfactory. All who are interested in the origins and development of theology, liturgy and Church history will be grateful to the learned professor of the Catholic University of America. Since Dr Quasten came to Washington from the University of Muenster, in 1938, he has launched the series *Studies in Christian Antiquity* and the new translations of the Fathers entitled *Ancient Christian Writers*, which have done so much to stimulate Patristics on both sides of the Atlantic. This crowning achievement is a monument to his mature erudition, and a major event in its field.

The title, Patrology, and even Dr Quasten's definition of it—" that part of the history of Christian literature which deals with the theological authors of Christian antiquity "—do not give more than a suggestion of the riches to be found in these volumes. They do not confine themselves even to literature, much less theological literature, because as well as hearing the diapason of the " Fathers " and " ecclesiastical writers ", we get the twitterings of apocryphal legend, and the off-beat discords of the heretics, as well as the faint reverberations of lost works, fragments and inscriptions. The successive introductions by which Dr Quasten groups and correlates each set of writings, Apostolic Fathers, Apologists, Acts of Martyrs, Gnostics and so on, serve admirably to bring out the progressive development of the central themes. His method, applied throughout so far as the subjects admit, is to give a sketch of each author's life, character and talents, then a summary of the contents of each work, followed by a series of synthetic studies on the main points of his theology, such as his doctrine on the Trinity, his Christology, ecclesiology or sacramental system. Lost and spurious writings are discussed and the manuscript tradition described with all desirable detail. A feature intended to enhance the value of the work for more advanced students is the very full bibliography given at the end of each of the sections mentioned above. These bibliographies include what is somewhat of a novelty in our Patrologies, very complete lists of editions, translations and studies in English, while Spanish and Italian works get their due for once. The net of references is cast wide enough to include not merely Dutch and Swedish, but the more exotic languages of Russia, Hungary, Rumania and modern Greece. Most welcome is the copious quotation from the original works of the Fathers, which gives the Patrology all the charm of a well-chosen anthology and makes it very easy to use.

History cannot be written with a camera, nor the history of doctrine with photostats. Dr Quasten had to sift, summarize and re-state ancient utterances

in modern language, and it was no easy task to find the objective way of re-saying things that have been much quarrelled over. He had constantly to sum up long lines of research and take sides on controverted questions. But his judgement is very fair and sure throughout, as even non-Catholic reviewers have expressly said. We may single out as especially illuminating his interpretation of the exordium of Ignatius to the Romans, with reference to the church that " presides over the charity ", and his masterly handling of the development of the doctrine of the Trinity, where the explicit faith of the first wrestlers with the concept demands to be sharply distinguished from their explanations of the faith. The early penitential discipline, with its pastoral rather than dogmatic connotations, is traced with great success. But the level of achievement is so steadily high over a vast range of subjects that we must be satisfied with general praise.

It would be however impossible, even for this happy combination of German erudition and American resources, to cover the vast field without missing anything. The opening section, on the Apostle's Creed, is unfortunate, since it assumes the early existence of two forms, one Christological, the other Trinitarian. No doubt this view would have been revised had it not been adopted before the studies of Crehan and Kelly were published. They are listed only in the second volume. Here too students could well have been reminded that their " Denziger " contains an excellent textual history of the creed. The innocent reader of the history of the Didache could easily take it that the manuscript, so happily discovered in the last century, had been found in Jerusalem instead of Constantinople. The theology of Ignatius should be completed by linking it with the fourth gospel.

The martyrdom of St Polycarp was surely the first place where Delehaye's *Les Passions des Martyrs et les Genres Littéraires* deserved mention. Papias, that influential " man of the grey dawn of antiquity " is seen too much through the prejudiced eyes of Eusebius, and Dr Quasten apparently ignores the testimony of Irenaeus that Papias was a hearer of an apostle. The translation of the much-discussed passage where Papias tells of his connections with the apostles is marred by an omission which changes the sense radically. This must have been a slip ; it was hardly a tacit correction of the text ? Even more inexplicable is the omission from the bibliography at this point of Zahn's classic study of the subject in the *Forschungen*, cited frequently elsewhere. The Bollandist *Acta Martyrum* are said to have reached volume 65 (1925). But another volume, the *Propylaeum* to December, dated 1940, now gives an invaluable commentary on the Roman Martyrology, a mine of hagiographical information. The Martyrology of Jerome is referred to, with no indication that it dates from one to three hundred years after the saint. The account of Pope Stephen (c. 250 A.D.) gives little idea of a Pope " of the calibre of Hildebrand and Innocent the Third ". His significance was not merely that he insisted on *nil innovetur* against Cyprian, but that in appealing to the Petrine text he formulated the papal supremacy as unequivocally as the Vatican Council. This was the place to notice the recent work of J. Ludwig, which is mentioned elsewhere, and Batiffol's *Cathedra Petri*. A consideration of Ludwig might also have modified Dr Quasten's view of the *Pontifex Maximus* of Tertullian. Further, the three " irremissible " sins, fornication, idolatry and

murder, were not grouped for the first time by Tertullian. They form a special group in the " western " text of the Acts 15 : 20, not to mention the rabbinical writings. It might have been noted that not all African bishops sided with Cyprian in denying the validity of heretics' baptism. Only 87 out of 200 came to his Council, and some even from near Carthage were absent, which suggests that it was not distance that kept the others away. It is a pity too that the famous passage on the Primacy in Cyprian's *De Ecclesiae Unitate* is quoted not in the form favouring the Petrine Primacy which is now generally recognized as the original, but in the later revised form, " interpolated " to extend the primacy to all the apostles. Strong reasons have been urged to show that Cyprian's hand was absent from the re-casting, though he no doubt sanctioned it. In a book so lavishly produced, space could have been found to print the two versions in parallel columns, especially as Dr Quasten agrees that the version which he prints from the Vienna edition is not the original.

Only the actual reading of these two masterly volumes can show these criticisms in their true perspective : they are trifling, compared to the vast positive achievement of Dr Quasten, which is particularly striking in the second volume, where he has to expound such difficult authors as Origen, Hippolytus and Tertullian, and succeeds so solidly. No theological library but will be immensely enriched by these almost indispensable volumes.

KEVIN SMYTH, S.J.

## PHILOSOPHY

*LA PREUVE RÉELLE DE DIEU, ÉTUDE CRITIQUE.* By Joseph Defever, S.J. Paris : Desclée De Brouwer. 1953. Pp. 145.

THIS book gathers into six orderly points the doctrine of the Louvain School about the scholastic proofs of the existence of God. " Real " in the title indicates the pre-occupation of the author all through to assure the reality of his argument and conclusion in the face of criticism by Ockham, Hume, Kant, Bergson, the Existentialists, and the many followers of all these, criticism of all abstract ideas, principles and reasoning. The book is like a carefully-planned military sortie from a beleaguered position.

1. The starting-point of the sortie is my own affirmation of a sensible object. This affirmation is known to me by reflection, which is an intuition, though an imperfect one, and so is safe from the criticism of the opponents.

2. The general principle on which the proof (sortie) rests is the principle of causality. But to avoid the attacks of the critics, efficient causality is passed by and final causality is singled out, the final causality of the object known on the subject affirming ; this I experience in the act of affirming, for by reflection I see that I am being drawn by the object towards fuller consciousness. The object is really other than I, and it draws me.

3. So far the author keeps to experience, intuition. But to get to God he has to take flight, intuition has to be left behind and abstract concepts and reasoning used. These are now justified as being necessary parts or conditions of our imperfect, growing kind of intuition, and deriving their reality from it.

4. Observing exactly by reflection the way my mind is moving, I find that this sensible object which I know now is not what I really and ultimately tend to know, but something beyond this and beyond all sensible and all limited objects. Because my affirmation goes beyond any limited object, therefore there is an infinite object which is what is really drawing my mind on. The reality of this infinite object, God, is guaranteed by the reality of the affirmation from which I began, and by the reality of my tendency to go beyond, and both of these I experience by reflection. It is what is tugging on the rope when I feel the tug.

5. Here the objection is met that knowledge is identity with the object known ; but we cannot have identity with God, we cannot BE God ; therefore we cannot know God. To solve this objection it is shown that when we cannot represent a thing to ourselves on account of its being beyond us, we can still signify or indicate it under the representation of another as sign or symbol. In this way we signify God under the signs of things which are more within our grasp. This analogical knowledge is identity with God, not as He is in Himself, but in this effect of His, my affirmation which I experience by reflection.

6. The principal objection is now encountered, that this God so proved is only an " objective " God having nothing to do with me, outside me, not mine, not existing " for me ". The objection is answered by showing that besides " objective " existence, " theoretical ", this proof shows that God has also " subjective " existence " for me ", because, as the proof makes clear, He is precisely what gives my mind its growth and perfection. The same is shown moreover in my acts of will which I also experience. I cannot help taking up with my will an attitude towards God which affects my whole life and destiny, whether it be willing admission of His existence and acceptance of His consequent claims on me, going as far as complete surrender of myself to Him in love, or whether it be the opposite, or in between ; but always it is something which deeply concerns me.

So far the author. Now for appreciation.

Contrary to what is often said or implied, there is progress in philosophy, progress towards fuller understanding of reality. Progress is made by criticism of the weak points of previous philosophers, reaction to exaggerations, vivid realization of a particular aspect of truth, defence of some part of truth which is attacked—supposing always that in grasping what is new one does not lose hold on something more important. The present author is wonderfully skilful in embodying in his proof many of the best points of important philosophers with whose doctrine on the whole he would disagree. For this the book is well worth while.

The author maintains that his doctrine is the true interpretation and continuation of St. Thomas Aquinas and that it is the truest progress. Such indeed is the contention of the Louvain School generally. The points which most strike one as new, from the standpoint of St Thomas at least, are the great insistence on reflection and intuition. One is strongly reminded of the position of Plotinus and what St Thomas called " Platonici " ; " fly hence ", that is, from the world of sense ; " look within ", which is reflection ; " cast away all ", disregarding the particular nature of the objects one is

considering ; and " let your mind be as it was when it came from Him ", which is the union so well described by the Author. This supposes that our mind is the first object of our intellectual knowledge, that sensible things are little more than an occasion for knowing ourselves, and that the ideal for us is perfect intuition of ourselves, with vision of God in ourselves as in a mirror. Now this view was definitely opposed by St Thomas, who maintained that it was angelic rather than human, and that the principal intellectual knowledge man has is direct knowledge of the world which is also known to sense, with knowledge of God only as of a cause or principle of that. The author would insist that he carefully avoids the faults of Plotinus, pointing to Maréchal's excellent study of Plotinus, and to his own exact qualifications of " reflection " and " intuition ". In spite of that one gets too strong an impression of Neo-Platonism, ancient and modern, one finds too much " *moi* ".

Those who are more familiar with the philosophical atmosphere in which the author finds himself would find this position more natural. It is an atmosphere of war, of siege. Reasoning, abstraction and causality are under a heavy bombardment which has gone on now for several hundred years with undiminished ardour. In that state of things stratagems are necessary to maintain the existence of God. To those who live in an area of philosophical peace the stratagems seem exaggerated and the whole sortie above described seems to be dictated by an unreasonable fear of unreality. War opens one's eyes and dispels illusions, but terror blinds one. At any rate the reader in a land of calm can peruse this book with great admiration for the capable defenders of truth out in the front-line trenches.

JOHN HYDE, S.J.

*THE CAUSE OF BEING.* By James Francis Anderson. St Louis : Herder. 1952. Pp. 172. 25s.

THIS excellent book is in some respects a disappointment to the hurler on the ditch. American Catholic teachers of philosophy are grappling with the difficulty of presenting to " College " students the philosophy of St Thomas Aquinas in a form which would " get across " without loss of depth. Various text-books and treatises have appeared which attempted to do this, with varying degrees of success. " Summa for Sisters " is a difficult ideal. Different points have at least been brought nearer to blackboard clarity.

Now the title of the present work might lead one to expect an advance on that front. For precisely *The Cause of Being* would seem to be the title under which Aristotle's Metaphysics would appear in modern American dress, according to the researches of the Toronto Institute of Medieval Studies particularly. According to Toronto (and they substantiate their view), " being ", which is the subject examined and explained in Aristotle's *Metaphysics,* is the " being " of the categories, what we experience, the world ; and " the cause of being ", or " being as being ", is what makes the world be, its intrinsic structure and its extrinsic source. The " Cause of Being " so understood would be an exact title for a " metaphysics " text-book. It would be no small relief to the " College " philosophy student and teacher—

their number is very great—if someone with teaching experience combined with Toronto knowledge produced a re-constructed Metaphysics as Aristotle would have written it had he known. The present work however is no text-book but an essay, like the author's previous essay: *The Bond of Being* (on analogy). Nor does it cover the whole field above indicated; as the sub-title says, it deals with "the philosophy of creation in St Thomas Aquinas", the action of creating. This is the first disappointment, caused by not reading the sub-title.

But, admitting that an author has the right to choose the scope of his treatment, another disappointment awaits us. For the striking title and background of American pedagogical effort led us to expect something attractive, ready to swim into our minds. But this book is heavy and dull. Not that the matter is uninteresting—far from it. Nor is it that the author thinks the matter too remote, for clearly he does not. But he presents it as a scarcely-altered doctorate thesis, and that appeals only to examiners. One would think, says the hurler on the ditch, that such a fine subject and such excellent matter could be presented by American imagination more appetizingly. One may very profitably go to this book to find out about great problems connected with the origin of the world and with God's consequent presence in it—but armed with fortitude. The cream of the subject, as the author rightly says, is the doctrine of the presence of God. There are a few other books on that particular point of philosophy, which have appeared in the last few years, all, like this, very good and very dull. It would not matter, as the schoolboy said, if it were in a remote subject like algebra.

JOHN HYDE, S.J.

## BIOGRAPHY

*CARDINAL GASQUET.* By Shane Leslie. Burns Oates. 1953. 21s.

SIR SHANE LESLIE is at home in the literature, and also the gossip of modern English ecclesiastical history; and he must have seemed a natural choice for this semi-official biography of Cardinal Gasquet. Yet the book as a whole is frankly disappointing. Here and there are chapters which will be read with interest by many who have been puzzled to know how this or that decision was taken in the recent past. The fact that Gasquet's name was on the *terna* for Westminster after Vaughan's death, and that he himself blamed Cardinal Moran for the last-minute decision at Rome to choose Bishop Bourne of Southwark, makes it certain that Chapter VI of this volume will have many readers. An earlier chapter lets us see what part Gasquet played in securing an adverse decision from Leo XIII on the vexed question of Anglican Orders. But Sir Shane tells this story too much as a tale of high ecclesiastical intrigue, and we are left with the feeling that a fuller study must yet be made by some better qualified historian. So too with the important changes made at Downside, and throughout the English Benedictine Congregation, when Gasquet was still Abbot of Downside. Here Sir Shane Leslie is so eager to be discreet that we are left with next to nothing. It is good news that Mr Nigel

Abercrombie is engaged on a biography of Edmund Bishop, who—though a layman—played more than a layman's part in that great movement for the restoration of full monastic life, as opposed to the earlier tradition of missionary work in so many scattered parishes.

Edmund Bishop's name occurs inevitably in the long chapter which discusses Cardinal Gasquet's work as historian, and Coulton's repeated challenges. Here we are told how Gasquet, whose health had broken down at Downside, was persuaded by Cardinal Manning to devote his great energy to research work in the British Museum and the Record Office, in accordance with the recent encouragement that Leo XIII had given to Catholic students of history. Without Edmund Bishop's help, it is clear that Gasquet's reputation would never have been made ; and once Bishop was forced by ill-health to withdraw from his position as Gasquet's fellow-worker, things went—to speak frankly—from bad to worse. But the story of how Abbot Gasquet gathered the materials for his *Henry VIII and the English Monastries* is here told for the first time, and it is a fascinating story. Whatever we may think of the Abbot-Cardinal's later mistakes, he must always have the credit of having been the first to challenge an old and deep-seated English Protestant prejudice.

That same courage, and that same zest for controversy, is also apparent in Gasquet's later activities as " The English Cardinal " in Rome during the years of the First World War. Here Irish readers will find more than one tit-bit of ecclesiastical gossip—though they may be puzzled to know the name of the see for which Gasquet recommended the appointment of Monsignor O'Hagan as Archbishop in 1915. The odd fact remains that this aggressively " English Cardinal " was in fact at least half a Frenchman. His mother was a Yorkshire woman, but his father was a French doctor who had been brought as a child to England for safety in the fateful year 1792. His grandfather, who had been royalist Vice-Admiral of the port of Toulon, had helped the English in their effort to hold Toulon against the revolutionary army commanded by Bonaparte. The future Cardinal's father was thus a naturalized Englishman, who had a London medical practice. Francis (later Dom Aidan) Gasquet was born in London in 1846, and used to serve Dr Manning's Mass at Bayswater.

AUBREY GWYNN, S.J.

*ST. VINCENT DE PAUL.* By Mgr. Jean Calvet : translated Lancelot C. Sheppard. London : Burns and Oates. pp. 302. 21s.

*ST. JOHN OF GOD.* By Norbert McMahon. Dublin : Gill. pp. 147 8s. 6d.

*ST. BENEDICT JOSEPH LABRE.* By Agnes de la Gorce. London : Sheed & Ward. pp. 213. 10s. 6d.

ONE excellent result of the popularity of biography among twentieth century readers has been to stimulate the art of hagiography. Lives of the Saints are still good, indifferent, and bad, but there are both a great many more of them and a higher proportion belong to the first two classes. Thus spiritual reading without tears flourishes. It may even paradoxically be urged that an indifferent life of a Saint is a good book, though a bad one, like a bad little girl is ' horrid '. Of these three books recently published that of St. Vincent

de Paul is " very, very good ". In excellent company, including Fr. Leonard's studies, Miss Sanders' biography and Henri Gheon's impression, it is still quite possibly the best life of a very French saint to appear in English—real English, for the translation is excellent. The familiar story of St. Vincent is told with attention to factual detail which nevertheless does not distract a reader from the main theme, a study in sanctity. Perhaps there is a slightly patronising tone, which in such a book is peculiarly out of place, but at least the author is well aware of, though he does not quote, St. Vincent de Paul's own dictum " Not all the saints began well but all ended well ". We get therefore a story of an expanding character as well as an activity also expanding, until both are on the grand scale. The ultimate experience is perhaps St. Vincent's greatness, his magnanimity rather than his amiability or charity.

St. John of God is written on a lower level. One can imagine a St. Ignatius, as yet unconverted by the lives of the saints, picking it up out of the pile, and starting off gaily to the sound of the horses' hooves and the clink of the young mercenary's harness. But it gets there as St. Ignatius did. And there are plenty of facts for those who prefer a portrait to a " close up ". St. John's life was dramatic, extraordinary and vivid with more than one scene for Murillo's canvas. But a word of warning. In spite of the praise lavished on the method, copious quotation from the Saint's letters is not always remunerative. St. John on paper remained very much the hired soldier turned clerk. His letters, at any rate in the form given here, with their " dear Duchess " are " sad stuff ". He was a man of deeds rather than words.

The third study, that of St. Benedict Joseph Labre, is really well done. From the very moving frontispiece to the excellent final chapter on his extraordinary popular cult this most strange of saints is set before us, sympathetically, it is true, but with a reassuring absence of any fancifulness, and pseudo-poetic glamour writing. One of the most successful of modern novels was spoilt because the mystic in it was represented as no more than a glorified half-wit, and rough living and sweet charity were identified not only with noble vision but near-idiocy. It was a natural reaction from a too worldly world, but one which would have been fatal to a biographer of Saint Benedict Joseph Labre. He was and remains a strange creature for the average man to encounter, a " queer " saint if you like, but not queer at all in the sense of being mentally deficient. To write his life requires something of a *tour-de-force*. The brief sketch from the pen of Father Arthur Little was perhaps the nearest thing to a picture of him we had in English. But this is a full-length portrait, not a brilliant impression. It is more convincing, if, one fears, less entertaining.

M. BODKIN, S.J.

*FATHER HECKER AND HIS FRIENDS*: *Studies and Reminiscences*. By Joseph McSorley of the Paulist Fathers. St. Louis: Herder. 1953. Pp. 302. $3.95.

ON 6 April 1858 five priests, all converts, all just dispensed from their vows in the Redemptorist Order, and soon to be reduced to four, found themselves faced with the launching of a new congregation as yet without a name and with nothing to recommend it but the Papal authorization for its foundation and,

no doubt, the individual reputations of its first members. Yet it was destined to make good as the Congregation of the Missionary Priests of St Paul the Apostle. Father McSorley, sixty-one years in the congregation, tells us that the Register of the Paulist Fathers in 1951 listed 252 Fathers, living and dead, and that he himself had personally known every one of them except two of the founders and five other members. His book is about " the ten men who may be described as the first generation of the Paulist Fathers."

It is a remarkable fact that, though all but one of these ten were converts, in 1948 not one of the then Paulists happened to be a convert (p. 152). But at the outset it was a definite asset to the new congregation that its first members came from various types of American Protestantism with a great variety of backgrounds, for from the outset they made conversions to the Catholic faith their main objective. Thus Father Hecker had been a New York Methodist, Hewit was a descendant of the Puritan John and Priscilla Alden, Deshon had been an instructor at West Point Military Academy, Baker had been rector of a fashionable Episcopalian church in Baltimore, Searle was a noted astronomer and instructor at the Naval Academy during the Civil War, Rosecrans was the son of a Civil War General (a Catholic), Robinson a Confederate veteran, Elliot an ex-army sergeant turned missionary, Walworth, Phi Beta Kappa of Union Theological College.

How the secession from the Redemptorists came about is related frankly and in some detail. There may have been a certain narrowness and excessive conservatism on the part of the Redemptorist authorities in Rome. On the other hand no misconduct could be charged against the five, who would fain have continued as Redemptorists. In the end they and their superiors parted on good terms. Nevertheless the early years of the new congregation were difficult, until by sheer merit and fine achievements in the mission field they won the favour and friendship of some leading prelates. The storm about Americanism, that phantom heresy as somebody well called it, came later. The name of Father Hecker was coupled with that of the great Archbishop Ireland. Certain writers, chiefly French, assailed the Paulists as propagators of the new ' heresy '. They were defended by, among others, a Frenchman, the Abbé Felix Klein in *L'Américanisme*, and they weathered the storm. They are now accepted as a matter of course on all sides, and their fine record is honoured. One of the tributes for which our author expresses particular appreciation was an article in the Jesuit weekly *America* (5 May 1928) quoted on p. 287.

The Paulists have done great work for the Faith in the United States. They have made many converts[1] and inspired a much greater number of Catholics with a new spirit. Anybody even superficially acquainted with American Catholic literature must be aware of their noteworthy contributions to it. There is, for instance, the *Catholic World* appearing since 1865. There are their many books, their innumerable pamphlets. Their lectures and missions throughout the United States have been very fruitful. Their influence on the missionary methods of other religious institutes has been considerable.

[1] Not by assaults on Protestantism but by their presentation of the Faith. They had many non-Catholic friends. Father Hewit's Alma Mater, Amherst (Congregational) College conferred on him the somewhat embarrasing honour of the degree of Doctor of Divinity !

This present book is for the most part a plain, vigorous narrative that reads consecutively, all supporting documents being collected apart in groups. It is full of interest. Of special concern to us in Ireland is the opening chapter in which are described the hardships and persecutions suffered by the Irish immigrants up to 1850 or so, together with what occasioned them. But the gist of the whole book is in the chapter (XI) which sets forth the aims and ideals of Father Hecker himself.

STEPHEN J. BROWN, S.J.

*BROTHER POTAMIAN. Educator and Scientist.* By W. J. Battersby, PH.D. London : Burns and Oates. 1953. Pp. xi+183. 15s.

BROTHER POTAMIAN was a distinguished, perhaps a great, educationalist. The natural bent of his mind was scientific ; his literary ambitions produced nothing of even mediocre value, and thus his training and his tastes coincided almost too well with the educational tendencies of the late Victorian age. As a teacher and as an organizer he benefited by the uninhibited first fervour, the first fine careless rapture of what its exponents too often hailed as the dawn of the Scientific era. The growing light and heat has proved torrid and trying, but a man works in his own time, and if for Brother Potamian in that dawn it was bliss to be alive, he is not to be blamed because, we, in the light of two wars and a world of growing infidelity, can see that the course set was not only far from ideal, but in many respects disastrous. The conversion of the great college of the Brothers of the Christian Schools at Manhattan from something like a university, a place which had produced men like Cardinals Mundelein and Hayes, into a " red-brick " polytechnic was not primarily his responsibility since in doing so he was, probably reluctantly, carrying out the inflexible orders of his French superiors. More than once their failure to appreciate local needs and customs proved a serious handicap to him, and this is well brought out in the present book. At the same time his gifts as a born teacher, and the exceptional industry and talent which enabled him, despite the exigencies of religious life, to take a real, if minor, place in the new aristocracy of the Scientists were given by them generous scope. He trained many generations of admiring and grateful if rather undistinguished pupils, and did splendid work to maintain the reputation of his Church in a hostile or indifferent and largely materialistic circle, which then, was and still is, one of great influence and prestige.

And what of the man Michael O'Reilly, the son of Famine emigrants who was baptized by Fr. Mooney in the new parish of St. Brigid's, New York and had for his first and well-remembered teacher Brother Chronian from Birdhill, Co. Meath, and for fellow novice and life-long friend and supporter Br. Curran alias Br. Noah ? This lad who faced his first class at the age of fifteen grew to take his place with the giants. Kelvin corresponded with him on friendly terms, Marconi admitted his debt to him. But it is quite clear even from the somewhat scanty personal detail Dr. Battersby gives, that he was and remained before all things a good religious, patiently, or at least perseveringly, submitting to the discipline and limitations of Rule and Obedience. Aptly enough this master of the new science of electronics was often described as a dynamo

of energy. He certainly had that characteristic American virtue in its perfection, and perhaps the most vivid page in the book is the pen picture of him conducting a science lecture like a harnessed cateract which the inimitable pen of Mother Janet Erskine Stuart has left us. But his energy, like that of the mighty Falls of his own country, was energy controlled, subordinated and directed, giving light and heat. It is refreshing to have his picture put before us with no extravagant claims of heroic virtue ; and the portrait is certainly not the less edifying on that account. On the contrary the country which bred and in part trained him, and the Congregation he adorned have good reason to be proud of " our Potamian ".

M. Bodkin, S.J.

## ECONOMICS

*A GUIDE TO KEYNES.* By Alvin H. Hansen. London : McGraw-Hill Publishing Company. 1953. Pp. xiv + 237. 27s.

*KEYNES' GENERAL THEORY : A Retrospect.* By A. C. Pigou. London : Macmillan. 1950. Pp. viii + 69. 6s.

These two books are useful additions to the literature on the *General Theory*. The first is by the foremost American authority on Keynes' economic doctrines ; the second is by the man whose writings were most forcefully and pointedly attacked by Keynes. By means of quotation, paraphrase, explanation, arithmetical and geometrical illustration, Professor Hansen works his way through the whole of the *General Theory* chapter by chapter. Each page abounds with the relevant references to the original work. Professor Hansen is not a slavish admirer of Keynes. He draws the reader's attention to passages that are badly expressed or contain minor errors and he does not hesitate to state flatly where and how Keynes was wrong on some very important points. Of special value to students is his opening chapter. It contains an excellent exposition of the attitude of many economists to Say's Law and answers the question so often asked : " Why did Keynes begin his book with the postulates relating to wages ? "

The chapter that should have the most appeal for readers is that on the theory of interest. Hansen without making any apology for his hero shows that Keynes' theory is open to exactly the same objection that he had made to the classical theory : it offers no solution because it is indeterminate. The theory acceptable to Hansen is that of Hicks, namely, the combination of the loanable fund analysis with Keynes' liquidity preference analysis. Parts of the book, especially the section on " Expectations and Dynamics," may be difficult reading for the uninitiated, but even this section is a most useful help to the understanding of the recent developments of Keynes' theories. The whole book helps the reader to understand not only the background against which Keynes wrote but also the later literature on Keynes' doctrines. It should certainly fulfil the desire of its author of leading more people to study the *General Theory* itself.

Professor Pigou's smaller work is based on an analysis of chapter eighteen of the *General Theory* in which Keynes summarized his whole argument. In

Pigou's estimation Keynes' great contribution to economic science is contained on pages 246–247 of this chapter where " he brought all the relevant factors, real and monetary at once, together in a single formal scheme, through which their interplay could be coherently investigated ". These factors were : the consumption function, the liquidity preference schedule, the expectations of entrepreneurs, the wage unit fixed by agreement between workers and employers, the quantity of money as determined by the monetary authorities. In a number of very short chapters Pigou considers what would be the effect on employment investment and so on when one or another of the governing factors differs while all the others remain unchanged. He expressly says that he is dealing with *differences* not changes in the factors, *a.v.* he is working in comparative statics. He does so because he believes that this is the method of Keynes ; " it could not tell us what happens to employment investment and so on while the system is in the *course of movement*. . . . Thus even in the most favourable circumstances that analysis is a staccato one, adapted to provide, not a moving picture, but only a succession of stills ".

It is true that much of the *General Theory* is comparative static analysis, but as Hansen shows conclusively, especially in his sections on Dynamics and on the Multiplier, it uses also period analysis (time lags) and moving equilibrium (continuous rates of change). This point is essential not only because it enables us to see that some of Pigou's criticism is unfounded but more importantly because it is a warning against over-readiness to apply Keynes' theory and techniques without having sufficient knowledge of the basic factors involved and of how they change as one or other of them is altered by legislation or by the free actions of men.

But not all of Pigou's analysis is unhelpful. His little work enables one to see more clearly the content and implications of Keynes' ideas. This is true, for instance, of his note on the rate of interest on which point he seems to agree with Hansen. His remark on the use of an increase in the rate of interest as a means of checking over optimistic investment has an air of topicality, " when the fever is cured the Banks' pressure should at once be released ". He agrees with Keynes when he says that in a closed system State control of the level of investment is perhaps the most promising approach to full employment, even though he points out that investment made by the State will tend to contract private investment especially if it is not financed out of bank credit. Recent history has confirmed his view that in an economy that is not closed a " balance of payments " problem may put serious limitations on efforts to apply Keynes' ideas to daily life. One cannot help being struck with the objectivity of Pigou's approach to the *General Theory*. His disagreements are few in number and they are put forward briefly and calmly. He concludes with a tribute to Keynes' greatness as an economist and as a man of wide culture, a tribute so sincere that one cannot but admire Pigou's own greatness as an economist and as a man.

KEVIN QUINN, S.J.

## HISTORY

*THE REFORMATION IN ENGLAND. Volume II. Religio Depopulata.* By Philip Hughes. Hollis and Carter. 1953. 42s.

FATHER PHILIP HUGHES has done nothing better than this elaborate survey of the Reformation in England, which he hopes now to complete in three

volumes. This second volume, which covers the last seven years of Henry VIII's long reign and the two short reigns of Edward VI and Mary, lacks the dramatic quality of the first volume. With the exception of the King himself, the great figures of the reign are dead, Cromwell's execution being in fact the dividing line between the two volumes. Father Hughes breaks away from the purely narrative form, and studies his problem as a problem in theology and canon law as much as in politics. His analysis of Cranmer's thought and action is particularly fine : here at least was one reformer who knew where he stood, and who worked unwearyingly for change. Gardiner is still Cranmer's chief rival, until the king's death gives Cranmer his chance and Gardiner finds himself in prison. But Father Hughes is more concerned to trace the growth of Protestant thought in such official texts as the Ten Articles of 1536 and the Bishop's Book of 1537, and the influence of this new thought on the King's Book of 1543. Here he writes as a theologian, but also as a careful historian who is conscious of the need to examine these dry texts for the light they throw on shifting policy, and their significance as signs of what was yet to come.

The second part of this volume is devoted to " The Supremacy Protestant " that marks the reign of Edward VI ; and here we have the opportunity of seeing Cranmer at work without the restraint of Henry's conservatism. Once again it is to such documents as Cranmer's " Book of Homilies " and to the King's two Prayer-Books of 1549 and 1552 that attention is chiefly directed, and we are made understand the rapidity and drastic thoroughness of the revolution that was being effected by a small group of powerful ministers who were in fact governing the country in the young King's name. Then comes the death of Edward, and the sudden reversal of fortune due to the bold challenge of Mary, whom Father Hughes rightly calls (as she is called in almost every European country outside England) " Mary the Catholic ". In this final section Father Hughes is at his best. We have here a full and convincing study of Cardinal Pole's character and policy, and of the Emperor's opposition to Pole's mission as one of the tragic causes of the Queen's ultimate failure. Pole was an Englishman, who knew his own country and who was from the first opposed to the Spanish marriage. Hapsburg policies prevailed in England, and once again we learn how little Mary had of that political sense which her half-sister had in such fulness. The duel between Legate and Emperor, with the added complication of the new Pope's distrust of his own Legate as more than half a heretic, is well illustrated in Part III of this volume ; and Father Hughes earns our special gratitude for calling attention to the sermon which Pole preached as Cardinal Legate in November 1557, three years after the Marian restoration and just one year before his own death and the death of his cousin the Queen. Here, in plain English, we read the grave words of warning which an English Cardinal thought fit to give his fellow-countrymen, and his personal view of the work that still needed to be done before England could once more be called in truth a Catholic country.

Finally, a word must be said of what is undoubtedly the most interesting, and for many also the most valuable portion of this volume : the long chapter on " The Fate of Heretics ". Here Father Hughes faces boldly, and with no illusions, the disastrous mistake that Mary made in ordering the execution of so many ordinary English folk for their conscientious adherence to the new

doctrines. Full use is made here of Foxe's " Book of Martyrs ", but with a keen critical sense of Foxe's propagandist purpose and methods. Father Hughes makes no bones about admitting that nothing has done more to make England Protestant and anti-papal than the memory of those grim burnings ; and he asks the question why these memories have proved so much more lasting and effective than the memory of Elizabeth's later torturing and executions. He finds the answer in the simple fact that so many of Mary's victims were just plain English working men and women, who could plead, and did in fact openly plead, that they were doing no more than prove faithful to doctrines which some of their Bishops, now their hostile judges, had not been ashamed to preach and teach when Cranmer's party was in the ascendant. That is a truth which few will question ; and it is perhaps characteristic of Father Hughes as historian that he devotes so many pages to the analysis of this deep national sense of wrong, whilst he dismisses the whole dramatic story of the execution of Cranmer, Latimer and Ridley in a single foot-note.

AUBREY GWYNN S.J.

*ART AND THE REFORMATION.* By G. G. Coulton. Cambridge : at the University Press. 1953. Pp. xxii + 622. 50s.

THERE is never a unity in a book of Coulton's and *Art and the Reformation* is no exception. Ostensibly the theme is to demonstrate that the decline of medieval art was due to the Renaissance rather than to the Reformation. And stated thus, it is clear that the book offers an outdated presentation of the history of art in which all kinds of irrelevant issues are allowed to obtrude themselves. But no book of Coulton's is ever without interest. He may have been an antiquarian rather than a historian, but his field of activity was Europe, and few medievalists rival the breadth of his interests. Historical understanding he may have lacked, but there was no doubting his enthusiasm.

What *Art and the Reformation* offers therefore is an outing round medieval Europe, with Coulton using odd scraps of information to illuminate some of his favourite theses—the part played by laymen in medieval artistic activity, the ignorance and childishness of the medieval mind, the vagaries of medieval symbolism, the medieval belief in physical Hell Fire. On this outing, the reader becomes acquainted with details which refute the romantic view of the middle ages which was prevalent in Coulton's heyday and which he set himself out to qualify by taking particular examples. He explodes one romantic bubble by showing how conscripted labour was used in the building of Eton and King's College. Again, he points out how the symbolism which lay behind medieval art, far from being profound, was often of a childish character : the hedgehog for example could be interpreted in at least two ways, as the example ' of rich and worldly folk who have a little body (that is little grace and virtue) . . . but are thick-set all round with thorns, that is, with riches, that are prickly and disquieting to the mind and heart ' or as the type of perfect Christian, since the hedgehog, which according to some medieval naturalists, had five different stomachs, resembles the righteous man, who has five different processes of meditating upon God's word.

There follows a typical Coultonesque digression upon the appearance of pseudo-saints in the middle ages—how, for example, an unfamiliar type of

crucifix was taken for 'a singular female saint, with a beard, and hanging upon the cross fully clothed'. The legend which grew up around the figure explained it as the daughter of the King of Portugal who had asked God to preserve her from marriage by disfigurement : she came to be known throughout Europe as Santa Liberata, Sanct Oncommer and Saint Wilgeforte, and her statue, according to St Thomas More, was in St Paul's Cathedral. It is fair to add that Coulton acknowledges his debt to the Bollandists for this remarkable story (cf. *Acta Sanctorum* 5 July).

Coulton continues without any unity save his desire to puncture an over-romantic attitude towards the middle ages. He disputes the argument that the pictorial representations in churches were the Poor Man's Bible : in his view, there was a surprisingly limited choice of subjects and much use was made of the apocryphal gospels. Medieval vandalism is shown in the use of tombstones to rebuild the church fabric, a practice which could be paralleled in Ireland with ogham stones. (p. 433). On the question of the influence of the Reformation upon medieval art, Coulton makes three important points : in the first place, it was Charles V who ordered the destruction of St Baron-le Grand, one of the most beautiful abbeys in Europe, in order to overawe the citizens of Ghent (p. 437) : secondly the destruction of old St Peter's under Julius II was an incalculable loss to art, history and Christian antiquities (p. 443). Finally, much of the destruction of French medieval stained glass took place, not in the sixteenth century under the reformers but in the eighteenth century under Catholic auspices ; for example, at Notre Dame de Paris the chapter replaced all the windows of the twelfth, thirteenth and fourteenth centuries with white glass, and at Chartres, a few years *before* the Revolution, six clerestory windows were destroyed by the canons to throw better light upon a marble group which had been commissioned by the chapter (p. 451). Other examples of ecclesiastical vandalism in the eighteenth century are also given.

Reading Coulton is a refreshing experience, when so much of the middle ages is bathed in an unhistorical romantic glow. He does bring out details which are unfamiliar to the general reader. And yet when all is said in his favour, his own approach is as unsatisfactory as the apologists who are his *bête noire*. He is always arguing a case, and one can never be sure whether an equally strong case could not be made upon the other side.

The historian should be above making debating points, and it is for this reason that Coulton is unsatisfactory—at bottom he was an apologist concerned to make a case, not a historian trying to understand both sides.

H. F. Kearney

## SPIRITUALITY

*THE CLOUD OF UNKNOWING and OTHER TREATISES by a 14th century English mystic.* Edited by Abbot J. McCann, O.S.B. London : Burns Oates. 16s.

*THE REVELATIONS OF DIVINE LOVE by Julian of Norwich.* Edited by Dom R. Hudleston, O.S.B. London : Burns Oates. 15s.

*THE REVELATIONS OF MECHTILD.* Translated by Lucy Menzies. London : Longmans, Green & Co. 18s. net.

The three books under review offer us the noblest ideals of the thirteenth and

fourteenth centuries. If scientists claim to have reached the " fine point " of matter, the mystics claim to have experiences in the " fine point of the soul " : that secret abyss ; " those delicious depths that are the noblest part of the soul and the likeness of the most Blessed Trinity " ; where man " receives the gifts of the Holy Spirit in a wholly divine manner ", (Tauler, Whit-Sunday).

The *Cloud of Unknowing* unfolds the economy of this deeper life, which should be the real life of man : the " more abundant life " promised by our Lord, as the fruit of His Incarnation. " Cloud " recalls some great scenes in the Bible. When Moses " entered into the midst of the cloud " the " sight of the glory of God " appeared ; at the dedication of Solomon's temple, " the priests could not stand to minister because of the cloud . . . then Solomon said : the Lord said that He would dwell in a cloud ", and at the Transfiguration, " a voice came out of the cloud, saying : this is my beloved Son." Many are repelled by the expressions of the mystics : " Dark night " ; *Cloud of Unknowing* ; " Purgation from desire ", believing that the end is an abnormal state, in which suffering is the dominant element. The end, on the contrary, is contemplation, a *possession* of God, through a union of the supernatural order, which no effort of man can bring about, but in the way of which he can place many obstacles, especially on the lower plane of sense and imagination : " the sensual man perceiveth not those things that are of the Spirit of God." (1 Cor. 2. 14).

Utterly different in their make-up, body and spirit are not *naturally* harmonious partners. They might be compared to an ox and a bird, yoked to a plough. One seeks to fly, the other must move on the earth. There is an inevitable tug. God did not intend the strain for man. A special gift of " integrity " prevented " the law in my members fighting against the law of my mind " (Rom. 7. 23). Through sin life became disordered. Sense life, notably the imagination, became an obstacle to our " conversation in heaven ". It became necessary to pass through a *Cloud of Unknowing* or a " Dark Night " to reach the goal, rest in Infinite Beauty, through union with Infinite Love. Such is the doctrine of the Mystics.

Normally, all our knowledge comes through the gateway of the senses. "Even God", says St. Thomas, "is known through the images of his effects ", (De Malo, 8, ad 3). But God can act directly on the intellect and will, as taught by St. Bernard in his Sermons on *the Canticles* : " It is not by the eyes that He enters, for He is without form or colour . . . nor by the ears, for his coming is without sound ; nor by the nostrils, for it is not with the air but with the mind that He is blended. . . . If I have looked without myself, I have found that He is beyond that which is outside of me ; and if within, He was at the inner depth still." If God does so, His touch is felt ; the soul is passive, under a completely new experience of *infused* contemplation. Of itself, it can do nothing to rise to this intimacy with God. But it can prepare itself, by removing obstacles.

The *Cloud of Unknowing* is by an unknown writer of the fourteenth century. His teaching is in the tradition of all the great mystics. Dom McCann's helpful Introduction, with notes, and Dom Baker's Commentary, are useful guides to the better understanding of this classic. The translation of Dionysius' Mystica Theologia, (under the caption Denis

Hid Divinity) is not easily followed, except by those familiar with mystical literature.

The " Revelations " show us two generous souls, who did pass through The *Cloud of Unknowing* ; and who confirm for us the Psalmist's invitation : " O taste, and see that the Lord is sweet ". Little is known about the lives of Julian and Mechtild. Mechtild spent some thirty years with the Beguines of Madeburg, a sisterhood given to prayer, nursing the sick, and needlework. She then joined the more gifted intellectual group of Helfta. There she found herself at home in the high spiritual tradition of St. Bernard, carried on by Saints Hildegarde, Gertrude, Mechtilde of Hackeborn. Julian, on the contrary, lived a solitary, hermit life, in a little cell attached to the Church at Norwich. The revelations, or " shewings ", were made to her in 1373.

They are a beautiful unfolding of God's care for the soul, revealed in Christ's work, especially in His Passion, and the final consummation. Dom Hudleston's Introduction, with his careful analysis, and examination of points of difficulty—for Julian did not shirk in her reflections the problem of evil—offers the best presentation we have seen of this most elevating book. We doubt if there is anything, in the spiritual line, more beautiful coming from an English pen. The opening of chapter 67, on the dignity of the soul is a good specimen of Julian's " shewings " :

> And our Lord opened my ghostly eye and shewed me my soul in the midst of my heart. I saw the soul so large as it were an endless world, and as it were a blissful kingdom. And by the conditions that I saw therein I understood that it is a Worshipful City. In the midst of that City sitteth our Lord Jesus, God and Man, a fair Person of large stature, highest Bishop, solemnest King, most worshipful Lord ; and I saw him clad solemnly. And worshipfully he sitteth in the Soul, even-right in peace and rest. And the Godhead ruleth and sustaineth heaven and earth and all that is sovereign Might, sovereign Wisdom, and sovereign Goodness—(and) the place that Jesus taketh in our soul he shall never remove it, without end, as to my sight : for in us is his homliest home and his endless dwelling, (pp. 138, 139).

Miss Menzies' translation of Mechtild, from the German, is a good sample of the scholarly work turned out by a group of Anglicans, inspired by the late Miss Evelyn Underhill.

Julian described herself as a " simple creature that could no letter." Mechtild is of quite a different stamp. Many critics consider Dante indebted to her. She is at home in the world of speculation ; and so the difficulty arises of disentangling the woof of her own imagination from the heavenly illumination she may have received. She has ideas on the last things such as judgment, purgatory etc. which need theological sifting. Many of her rhapsodies are of an exalted nature, so that Heinrich of Halle, sending his High German version to a convent, recommends the reader : " to pray the *Veni Creator* seven times before the altar. Do not open this sealed book till you have prayed these prayers." Her theme is ultimately the same as Julian's : Love : " such sweetness of love, such heavenly knowledge, such inconceivable wonders." But she felt between God and her soul the fleshy cloud, so fully considered in the *Cloud of Unknowing*. " I looked at my body ; it was heavily armed against my poor soul . . . with all the forces of nature. Then I looked to the

weapons of my soul and saw they were the sublime sufferings and death of Jesus Christ."

These three books form in themselves a little library, setting forth the meaning of the Wise Man's exclamation : " O Lord, who lovest souls."

GEORGE BYRNE, S.J.

*THE SIGN OF JONAS.* By Thomas Merton. Dublin : Clonmore & Reynolds. 1953. 18s.

THE sign of Jonas was the official proof, so to speak, which Christ gave of the truth of His claims ; it was the sign of life that springs from death. Since then it is the sign of all Christians, indeed of all who will share in the resurrection of Christ the head of humanity. For Fr Thomas Merton it is also the paradox of a hidden intense life which came from a death to all the things which make up what the world calls life. " I feel " he says " that my own life is specially sealed with this great sign which baptism and monastic profession and priestly ordination have burned into the roots of my being, because like Jonas himself I find myself travelling towards my destiny in the belly of a paradox."

This book is a spiritual journal of the first five years the author spent in the Trappist monastery of Gethsemane in the middle west of the U.S.A. He records the little exterior events which constitute the daily life of a contemplative—the round of monastic offices, the regular duties, the prayer, the meals—of a life that is simplified to its essence. But through and behind this chronicle of exterior things he records the growth of his soul in its search for God. Thomas Merton goes from strength to strength and this is certainly the most personal and remarkable book he has written. The journal was kept spasmodically with no idea of publication.

So fine and sincere is the writing that even those for whom the Trappist vocation has no meaning and may even seem something repelling and a kind of deliberate frustration, will feel its attraction. They will see as they read that the silence, the regularity, the austerity, lead to a deeper self-possession, to a peace, a contentment, which can only come from the things that are akin to the soul of man. In that way the book is a moving *apologia* for the contemplative and monastic life.

But Catholics and those especially who are interested in the spiritual life will find here an appeal and illumination. The book is written with great feeling ; in his comments and elevations he manifests his advance in contemplation ; how with the gradual death to the life of the senses, God comes to mean more and more to him, is seen to fill everything and to be the very life of his soul. The great event of these years was his ordination to the priesthood ; and his chapter on the meaning of the priesthood and of the Mass is a rare piece of spiritual writing. The epilogue is an account of his duty as fire-watcher during the night of 4th July 1952. With a watchman's clock, soft slippers, and a flashlamp he made the rounds of the sleeping monastery ; he conveys in a very moving way the emotions of soul that he experienced. This is a remarkable spiritual book which reveals the author as a true contemplative and as a writer of rare power and feeling.

HUGH KELLY, S.J.

*OUT OF NAZARETH.* By Neil Kevin. Dublin : Clonmore & Reynolds 9s. 6d.

THERE is a pathetic interest attached to this book ; its publication was followed shortly by the untimely and unexpected death of its gifted author. Fr. Neil Kevin was well known to great numbers of readers, even outside his own Faith, as a writer with a distinctive gift of observation and expression. He had in a special degree the power to evoke memories and scenes of the past in a manner that was at once wistful and humorous. *I Remember Maynooth* brought joy to and some pathos to great numbers of the old *alumni* of the great college of which he himself was a brilliant professor of English. His volume *No Applause in Church* was read with delight by very many who never went to church and least of all to a Catholic church ; it was a collection of witty, shrewd essays, that were full of spiritual instruction, conveyed in a style so friendly, simple and human that it disarmed the hostility and suspicions of even the most bigoted.

*Out of Nazareth* is also an exercise of that gift which the author used to such good purpose in *I Remember Maynooth.* It is an effort to vivify a remoter and more significant past, the world of the gospel. There are many things which stand between us and a vivid realization of the world described by the evangelists. The purpose and style of the evangelists, the institutional position these writings have as the vehicle of religious instruction, most of all reverence for the central figure, these and many other things prevent a modern reader from getting the distinctive atmosphere of these far off events and scenes. The author then aims at giving us the impressions we should have if we were eyewitnesses of these events. He aims at making the gospel live for us who are so far removed in time and conditions of life.

That is of course a delicate task, for one who respects the data of the gospels. Invention and imagination might very easily be given too much rope ; the figure and teaching of Christ might easily be distorted. But Fr. Neil Kevin performs this task with equal skill and reverence. The scenes and events are described in a lively and interesting way ; we are really brought close to the actors ; we come to share their ideas and outlook. The author really evokes the past, and puts before us vividly scenes which familiarity had dimmed and made lifeless. His book is a fresh approach to the gospel and enables us to feel its life and charm in a new way.

HUGH KELLY, S.J.

## SHORTER NOTICES

*THE WORLD AND THE WEST.* By Arnold Toynbee. Oxford University Press. 1953. Pp. 99+vi. 7s. 6d.

PROFESSOR TOYNBEE'S Reith Lectures for 1952 contain very much the mixture we met before in his *Study of History.* There is the same broad sweep of generalization, the same attempt to talk in terms of " World History " ; there are also the same disadvantages. Many will find Professor Toynbee's rigid separation of " cultures " as unconvincing as it was previously ; for example, was the Byzantine tradition so radically distinct from that of Western Christendom as Professor Toynbee would have us believe ?

The main theme of the Lectures is that Europe's conquest of the rest of the world was based on a superior technology without any religious stimulus. This spiritual vacuum in the Western mind has been responsible for the success of the dynamic Western heresy, Communism. Professor Toynbee suggests, however, that the ultimate historical answer of " the World " to " the West " may be on the lines of its answer to the Graeco-Roman West's challenge 2000 years ago. That answer was the emergence of a universal religious ideal " with no discrimination between cultures, classes or sexes " (p. 95). Catholics will be interested to find Professor Toynbee citing the Jesuit missionaries to the Far East in the 16th and 17th centuries as pioneers in such a path because " —they tried to disengage Christianity from the non-Christian ingredients in the Western civilisation and to present Christianity to the Hindus and the Chinese, not as the local religion of the West, but as a universal religion with a message for all mankind." (p. 64).

JOHN B. MORRALL

*SELECTION I. A Yearbook of contemporary thought.* Edited by Cecily Hastings and Donald Nicholl. London and New York : Sheed and Ward. 1953. Pages xxi and 216. 15s.

THE modern taste for digests has invaded even the learned world. This first volume of *Selection* contains reprints of thirteen articles by Catholic scholars (French, German and English), translated (when necessary) into readable English, and prefaced by an ingeniously-written introduction which contrives to find a unifying principle for a remarkable variety of themes. It is hoped by the publishers that this Yearbook will be the first of many. One idea behind the venture was to give articles of exceptional merit more permanence than magazine publication can give. The articles are erudite and have every appearance of being authoritative. Anthropology, biological and cultural, Psychology, Theology, Scripture and Logic are all represented. Not many readers will be sufficiently versed in these disciplines to form a just appraisal of all the articles. That on the Origin of Man by Professor Josef Kälin of Fribourg seemed to the present reviewer a very good summary of the relevant data and current scientific hypotheses concerning human evolution. It is written from the viewpoint of biology. But, taken in conjunction with Father Cyril Vollert's theological treatment of the same theme in *The Catholic Mind* (New York), March, 1952, it would serve admirably to inform educated Catholics of the present state of expert opinion on this much-debated topic.

Libraries, especially, will be interested in *Selection I.* Its excellent print and beautiful binding will make it a handsome addition to their shelves.

MICHAEL CONNOLLY, S.J.

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